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THE HIGH SCHOOL DEPARTMENT OF THE STATE ASSOCIATION.

PROCEEDINGS OF THE SIXTH ANNUAL CONVENTION, AT HARRISBURG.

THE first of the series of educational meetings which took place in Christmas week was that of the High School Department of the State Educational Association which convened for its Sixth Annual Session in the Chamber of the House of Representatives in the State Capitol, on the evening of Monday, December 26, 1910, at eight o'clock. There was a large representation of high school and college people present at the opening session to listen to the interesting program which had been presented.

Professor Albert H. Welles, of the Scranton High School, Vice-President of the Department, presided during the evening session. The general topic of the evening was "College Entrance Requirements," which was considered under several heads. Dr. Geo. E. Fisher, Dean of the College, University of Pennsylvania, presented the first paper on the subject,

WHAT IS PREPARATION FOR COLLEGE?

In the brief time allowed me, I can but hint at some points which, in my opinion, are essential in starting the requirements for admission to college and in preparing candidates to meet these requirements. Fortunately, two will speak on the general question and special phases of it are to be presented. I feel free, therefore, to confine myself largely to the aims and ideals in preparation for college, though I shall include some statement of what should be its content.

I assume that this preparation begins with the first instruction of the child and that thenceforth it is not inconsistent with the best preparation for life; that preparation for admission to technical schools should be quite as liberal as preparation for the courses in Arts and Science; that its aim is to give, first, sound and symmetrical development, mental and physical, and, second, useful information; that this preparation is secured by more intensive and less extensive work, by wider options in recognition of the different mental aptitudes of the pupils, and by a better adaptation of the work to growing minds.

The fact that preparation for college begins when the child first enters school often is forgotten in discussions of the question. Therefore, I venture to call attention to three defects in the work of the grade schools.

First, much of the teaching neither imparts useful information nor gives a compensating gain in mental development; second, the naturally inquiring mind is so taught that it soon learns to replace "Why?" by "How?"; third, too little recognition is still given to the wise maxim, "A sound mind in a sound body."

Therefore, my idea of what the high schools can do in preparing boys and girls for college, and in continuing their preparation for the best use of life, which to me is the same, is based upon a more rational curriculum and saner methods of study in the primary and grammar grades as well as in the high schools. The curriculum should include much less of the subjects now taught, greater efforts should be made to encourage the inquiring mind, and ample playgrounds should be provided with more work out-of-doors under the guidance of competent teachers. I would also add one subject to the studies in the grades—a modern foreign language. One-half of the time now devoted to mathematics, for example, might with advantage be given to the study of a foreign language. I advocate this subject for the grades below the high schools on account of its educational value when properly taught (and herein is the saving grace), and also because the youthful mind most readily acquires a foreign language. There would then be less outcry against the requirement of two foreign languages for admission to college.

But this is the High School Department, and so I pass to the work in the high schools.

Much is said to-day about "preparation for life" versus "preparation for college" as if these are or should be inconsistent, and particularly as if the high school or the college

can prepare for life. Let me remind you that each one of us is daily adding to his preparation for more complete living. We shall not, however, disagree on this point if by "preparation for life" is meant the most complete development and training, mental, moral and physical, of which the particular pupil is capable at any stage of his school or college course. But, if the individual is to be given specific preparation for any special work, then our ideas are opposed. If circumstances in individual cases make such preparation necessary, it should be secured, if possible, in parallel courses in the high schools. There is an advantage in a close association in school life of pupils who have different aims, different outlooks upon life, and different ideas of preparation for it. Such courses, however, in which the manual and vocational work is prominent, cannot be regarded as adequately preparing a boy or girl for college, liberal or technical. Indeed, information which I am gathering from technical schools and shops and manufactories lead me more and more to the opinion that this part of training, as now given, is of less practical value than its advocates assume. The superintendent of the largest industrial plant of its kind in the world summed up the conclusions to which his experience with young men who had received training in manual and vocational work had led him, by strongly urging a broad, liberal training before entering the shops. His special plea was that we should teach the boys to think and let the shops teach them to do.

And yet, unfortunately, the modern tendencies in commercial and industrial life are placing a strong grip upon our schools and colleges. Do we not often forget, and, unconsciously perhaps, teach our boys and girls to overlook the fact that there is a great difference between immediate earning capacity and ultimate earning capacity?

The preparation for our technical and professional schools which still admit directly from the high schools, should be, if anything, even more broadly liberal than the preparation for Arts and Sciences. Such recognition of manual and vocational training as may be given by the colleges should be largely toward admission to the latter courses. Once a boy is started on the definite preparation for his future profession, he is prone to regard all studies not directly bearing upon it as of secondary importance. Yet he is to live in the same world as his fellow students in Arts and Sciences and should have some equipment for doing his share in helping to solve the social and political problems of the community in which he will live. With the narrower training one is like a stone hewn to fit a particular position; another who has had a broader education and a more varied intellectual development may not at once fit better, or as well, his environment, yet he will more quickly adjust himself to it and, what is more important, may exercise a directing influence over it.

Any statement of what should constitute preparation for college, within the limits I have set, must then assume that the object of education, in school and college, is to teach one how to live, not the most intense life but the most useful life; that the acquisition of wealth is not an end but one means toward the development of the maximum of happiness. Surely, this is not too ideal a view!

In the first place, then, this preparation should seek to give as strong and symmetrical a development of the intellect as possible. And this implies not only mental capacity and vigor but also an appreciation of and sympathy with the obligations of the individual to society and the State.

To me it seems that once in the life of every one must come a vision, from which will develop an ideal to be a permanent, impelling and compelling part of his spiritual life. He who can see in the stars only nuggets of gold is ill-fitted to appreciate their orderly movements in the heavens, and he who sees in the forces of society only means toward the realization of his material and social ambitions cannot contribute much to the maximum of happiness to himself or others. Is the high school age too young for this vision?

In the second place, this preparation must recognize that a certain fund of information, a knowledge of physical facts, of human motives, etc., is necessary to a safe and proper conduct of one's life. Therefore, subjects of study which add to the student's knowledge of the world and the things in it and which can be understood and appreciated by those in the high schools, should be accepted by colleges toward admission.

And in the third place, we must recognize that the minds of boys differ as do their bodies and cannot all reach their best development by the study of the same subjects; that any subject which can occupy the serious attention of the human mind possesses some cultural value, but that this value depends in large measure upon the spirit in which the subject is pursued. I can imagine as much inspiration derived from the study of the construction of a bridge as from the reading of a passage in Homer; as much disciplinary value, of its kind, in making a piece of brass work as in the demonstration of a theorem in Geometry. Moreover, we may properly recognize that the great interest taken by many boys and girls in manual training and vocational work reacts favorably upon their attitude toward other studies. Such subjects, then, may be accepted, in a limited degree, as a legitimate part of preparation for college, if their disciplinary and cultural values be not subordinated to their practical utility. The mental satisfaction in having produced an artistic, or even a useful article, must be stronger than the thought of its commercial value.

More concretely, now, my idea of preparation for college would devote three-fourths of the four years (not, of course, the first three) to specific subjects.

English, throughout the four years, but with more attention to developing ability to state ideas clearly as a help to thinking clearly, and with less attention to a forced study of the classics in English literature.

Ancient or Modern Foreign Languages, throughout the four years, not necessarily but preferably *two,* especially if a foreign lan-

guage be studied in the grades. This study is a material aid to clear thinking and to the correct use of English, and gives the student a closer intimacy with the thoughts and feelings of other peoples.

Mathematics, through elementary algebra and Plane Geometry, for their value in mental discipline. But much that is now required in both subjects should be eliminated, some parts being suited only to students of more mature age and development.

United States History and Civics, since, if only one history is a necessary requirement, it is better to know the rise of one's own nation, the development and present character of the institutions of which one is a part.

One *Science,* for its practical and disciplinary value. At present not all schools teach any science satisfactorily, because of inadequate laboratory facilities.

The optional subjects, amounting to about one-fourth of the preparatory course, should include, in addition to further work in the required subjects, manual training and vocational work, sociology and kindred subjects, always under the restrictions which I have stated and which place special emphasis upon their cultural and disciplinary values.

But each school should attempt to do only what it can do thoroughly well and only those schools which are fortunate enough to have sufficient financial support can cover the whole field which I have outlined.

In the curriculum the order of studies should be adapted to the growing maturity of the pupils' minds. Languages should be begun early; the sciences, for example, only in the last years.

And, finally, the programme of each pupil should be limited in the number of subjects included in it. We must do less extensive and more intensive teaching. Many of us to-day, I fear, are becoming tourist guides, hurrying our charges past objects and scenes of surpassing interest and beauty, intent on seeing many things, but unable to linger with appreciative interest before any.

Let us stand, not as obstacles in the way of a sane recognition of all that has permanent value in education, but as a strong rock of defense against the sweeping away of all old ideals which, after all, have done so much for us through the centuries.

Prof. Charles W. Hobbes, principal of the Lower Merion High School, continued the discussion. He said the backbone of the present college preparatory course consists of the old traditional subjects—English, Latin, Greek, French, German, History, Science and Mathematics. As to whether college preparation fits for life, let us look at college examination questions. I have examined two thousand sets of college examination questions covering the entire field of college preparatory studies. Let me refer particularly to those relating to my specialty, Ancient History. I choose this not because it is my specialty, but because the teacher of this branch enjoys a greater latitude than many others. These are the results:

Out of 740 questions in Ancient History given by eight leading colleges of Eastern United States, four of which refuse to accept certificates from high schools, 34 per cent. of the questions dealt with ancient politics, 22 per cent. with descriptions of battles, 11 per cent. with biography, 5 per cent. with social conditions, 4 per cent. with literature, nearly 2 per cent. with art, and an equal percentage with economic questions of ancient life. Only four-tenths of one per cent. require comparison with modern conditions. And who were the historic characters most frequently asked about? Some of the greatest rascals in history—Philip of Macedon and Alcibiades. Socrates, Demosthenes and Pericles are scarcely mentioned.

Prof. Hobbes then read the following list of questions on physiology asked of applicants for admission to a famous women's college, in order to show how little hygienic and sanitary ideas are emphasized and how purely technical and anatomical are the required facts:

1. Explain fully the structure and use of cartilage. 2. What illustrations of the action of levers are found in the ordinary movements of the body? 3. What is a vertebrate animal? Name the subdivisions of the group. To which does man belong? 4. What are carbo-hydrates? Why are they important? Are they found in the body? 5. What are the wastes of the body? What organs are concerned with their removal? 6. Describe the villi and explain their use. 7. Give a general account of the pulmonary circulation. What is peculiar to it? 8. Explain fully what is meant by "grey matter." Where is it found? 9. Describe in detail the relation of the crystalline lens to other structures about it and show why it is important. 10. What structures are concerned in the sensation of taste? 11. What action of the blood vessels is illustrated by blushing? Does this action occur elsewhere and to what end?

See what an opportunity is lost. Not a part of this list could be taken as a guide to correct living by the young women who enter this college. This illustrates what college preparation actually is. I have some idea what it should be.

RATIONAL COLLEGE ENTRANCE REQUIREMENTS.

Dr. George L. Omwake, Vice-President of Ursinus College, made a brief address upon "Rational College Entrance Requirements." He spoke much as follows:

In preparing for this discussion I attempted to make a chart of the entrance requirements of the colleges of Pennsylvania. The undertaking required so much of my time that I have been unable to put my remarks in writing. Moreover, the results of my tabulation have so confused me that I fear I do not have very clear ideas on the subject. If the printed

statements of the different colleges should so confound one, I little wonder that the actual attempts to meet these manifold requirements should greatly annoy you school men.

My study has impressed me with the importance of having uniform standards and a common unit of measurement. Most of the colleges have adopted the unit recommended by the College Entrance Examination Board, namely "A year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work." One college employs a unit that approximates this, but is just enough different to be troublesome. Another uses a purely arbitrary system of counts, while still another sets forth its requirements in terms of "hours" which after all do not prove to be "hours" in the sense in which that term is usually employed in colleges. A number of colleges do not represent the admission studies in terms of units of any kind. There should be uniformity in this matter and all the colleges and secondary schools would do well to adopt the unit of the College Entrance Examination Board.

Again it is no great gain to the colleges that such a variety of standards should be maintained while on the other hand this is very confusing to the schools. The Carnegie Foundation, after a study of the subject, recommends 14 units as a minimum standard requirement for admission. About half of the colleges of Pennsylvania now prescribe 14½. This is reasonable and can be met by the schools. Furthermore the same standards should prevail within the same institution with reference to the various courses leading to different degrees. Some colleges, while maintaining 15 units for the admission of candidates for the A.B. degree, require only 14 or perhaps even less for other degrees. Every degree in each college and in all the colleges should represent the same amount of work.

I think also that the time has come when colleges should quit compromising with their own standards. There is a species of dishonesty here that is unworthy of our higher institutions. The standards should be made reasonable and then they should be lived up to by both the colleges and the secondary schools. It would be an advantage if a simpler statement of entrance requirements should be employed in the published announcements of the colleges. As I leafed through one catalogue after another the thought came to me that if a school boy could clearly interpret the announcements of some colleges he should be admitted without being subject to the examination.

With respect to constant and variant elements, there should be two sets, one for the course leading to the degree of Bachelor of Arts and one to the courses leading to other degrees. The Arts course should be continued as the representative of classic learning, and as such must require different subjects for preparation. In the courses for the other degrees representing liberal and technical study, the way is open to supply preparatory and college courses for those who do not care for Latin and Greek. I believe that these subjects should be continued as the *sine qua non* of the Bachelor of Arts degree.

Prof. N. M. Emrey, Registrar and Vice-President of Lehigh University, continued the discussion of the subject.

RATIONAL COLLEGE ENTRANCE REQUIREMENTS.

The President of this High School Department of the Pennsylvania State Educational Association has asked me to discuss only a special phase of college entrance requirements, which he puts in the form of a question, as follows: Is it possible for the average high school to prepare properly for special courses in specializing colleges that demand heavy special requirements, without sacrificing to the few the interests of the many? On the other hand, can such colleges afford to require less for entrance?

If we consider the nature of the average high school with its limited educational facilities, its poorly paid teachers, its limited opportunities, I am inclined to think that we would be practically unanimous in answering the question in the negative. The average high school hardly prepares properly for the average college which does not have "special heavy requirements." If only high schools of the first class are considered the question becomes a debatable one, with a doubtful answer, which depends upon a number of circumstances. We all know that first-class high schools can and do prepare students properly for special courses, and that the average student from such schools can and does hold his own with the average student from private preparatory schools. Practically all of the up-to-date high schools have several courses of study with the leading subjects prescribed but allowing some freedom of choice on the part of the student. School authorities recognize that it would be folly not to take into account the various needs, opportunities and aptitudes of the pupils. If such a school has an adequate faculty of wide-awake teachers who will take occasion at times to arouse in their pupils an ambition to obtain collegiate training, and will urge upon those students who are fortunate enough to be able to look forward to a college course the desirability of a reasonably early choice of the kind of work desired, there seems to be no insurmountable obstacle in the way of preparing students for the "specializing colleges."

The so-called classical colleges have for years been demanding and obtaining from schools without question, as a necessary preliminary for the work of the Freshman year of the A.B. courses, a great amount of special preparation, in fact more than 50 per cent. of the total. The standard special requirements for A.B. courses are Latin (Grammar and Composition, Caesar, Cicero, Virgil), four units; Greek (Grammar and Composition, Xenophon, Homer), three units; Greek and Roman History, one unit; a total of eight units of special work and the schools have willingly and unhesitatingly prepared boys and girls for college work in Livy and Tacitus, Herodotus and Thucydides—highly specialized work of a peculiar character.

Now, however, few persons are so bigoted as to maintain that a knowledge of dead lan-

guages, admirable and desirable as it surely is, is the one distinguishing characteristic of an educated gentleman. At present for some reason or other the colleges offering strong scientific and engineering courses are particularly attracting young men who have no special aptitude for languages but who are ambitious to make the most of themselves. The requirements for admission to most of the scientific courses correspond reasonably to the curricula of the best high schools, and so these colleges may be eliminated from the present discussion. The engineering schools remain for consideration.

The engineering colleges, as a class, require in entrance English, elementary science, history, and foreign languages practically the same as colleges offering B.S. courses, namely English, three units; Science, one unit; History (modern preferred and generally specified), one unit; some foreign language (either German or French generally specified), two units. In addition to these seven units most colleges, whether general or technical, specify elementary algebra, one and one-half units; and plane geometry, one unit,—making a total of nine and one-half units. Practically all educators agree that the above mentioned work in mathematics is not excessive.

The special demands of engineering colleges then become their requirements in mathematical subjects higher than elementary algebra and plane geomery. There is no uniformity of practice among engineering colleges but for the sake of the discussion we will take, not the average mathematical requirements of technical schools, which would be perfectly fair, but an extreme case; an engineering college that demands advanced algebra, solid geometry, and trigonometry. These subjects are rated as one-half unit each, making a maximum total of one and one-half special units charged to the debit side of engineering colleges, less than one-fifth of the amount of special preparation demanded by classical colleges. Every one admits that training in mathematics is unsurpassed for the development of certain kinds of mental power. All that the engineering college asks is that it be continuous throughout the high school course, and inasmuch as the technical colleges throughout the country are attracting so many students it does not seem to be unreasonable for high schools which offer eight units of work in classical subjects to offer one and one-half units of work in advanced algebra, solid geometry and trigonometry to those students who wish to pursue studies in technology. It would of course be folly to compel all high school students to study these mathematical subjects. If this were done the interests of the many would surely be sacrificed.

The second proposed question, Can specializing colleges afford to require less for entrance? is a difficult one to answer. Many colleges have been inconoclastic enough to offer A.B. courses without elementary or advanced Greek and it is quite imaginable that at some time in the indefinite future little or no Latin will be connoted by the A.B. degree. There is a general tendency among the leading schools of law and medicine to require of applicants for admission a complete or partial course at some approved college and the medical schools also demand that the college course shall include certain prescribed work in chemistry, physics, and biology. Just as soon as the average engineering college can increase its courses to five or six years or can demand at entrance a complete or partial college course including instruction in chemistry, physics, mathematics and the elements of mechanical drawing the problems of the relationship of the high school to the engineering college will be solved, for in either case the requirements will naturally be those of the B.S. courses with a limited number of constants and a wide choice of elective subjects. Since the business and industrial world is insistent in its demand for more highly trained engineers, there is every indication that the best engineering schools of the future will be on the same basis as the best schools of law and medicine of to-day, and with the wonderful advance of technology the perplexing question even now is, of the hundreds of desirable things what can with least detriment be omitted? As advance rather than retrogression is the keynote of American educational methods it hardly seems reasonable to expect professional colleges to demand less for admission than their present requirements, although to meet existing conditions the details may at any time be revised.

Continuing this discussion, Professor Baker, of the Philadelphia High School, said that he represented a girls' and boys' high school where 810 out of the 3000 pupils are preparing for college. He has no question with those who represent medical or technical schools. Their requirements are not excessive.

But I note the topic, Rational College Entrance Requirements, I do not believe that the requirements as stated in letters to me and in the catalogues of certain women's colleges are rational. I fear I am an insurgent. Applicants for admission to women's colleges should be admitted on certificate without examination. The women's colleges are demanding impossibilities. I advocate a clearing-house for college and secondary school requirements. Not long since I wrote to the heads of departments of mathematics, English, French, Latin, German, Chemistry, Physics, and History, as they appeared in the catalogues of the thirteen colleges where our girls have gone during the last two or three years: Smith, Wellesley, Vassar, Bryn Mawr, Swarthmore, University of Pennsylvania, Cornell, Michigan, Wisconsin and others. Answers were received from most of them. I had enclosed a form indicating what information was desired, and which was not given in the catalogues.

Our Philadelphia High School day consists of five hours—from nine until two. From this must be deducted time for opening exercises and lunch. What time remains is divided into five recitation periods. There are twenty-five of these in a week. Suppose you try to apply the unit system to those conditions. It is impossible to present certain work to a fourteen or fifteen year old girl. It must be deferred until later years; and yet some col-

leges demand that certain work shall be done at times which they specify.

The speaker then proceeded to give the results of his investigations into college entrance requirements: English—Five recitations a week for four years are required. None of this should be surrendered but less time should be devoted to a critical examination of the classics and more to expressing the pupil's own thoughts. Mathematics—Two and one-half years, five hours per week, are required. We cannot do the work in that time. A girl is not prepared to study geometry until the junior year, so that must be put into the last two years. History—The colleges require history in the senior year. Two or three histories should be used, including English History. Latin—Only one college asks less than four years, five hours per week. The work can not be done in less time. The requirement is preposterous. We put in six years work in our four years course.

The paper announced upon the program by Prof. Raymond W. Seis, of the University of Pittsburgh, was then read upon

COLLEGE ENTRANCE REQUIREMENTS AS A CONTROLLING FACTOR IN HIGH SCHOOL COURSES.

The proposition that the high school does not exist primarily in the interest of the very small percentage of its students who go to college is at the present time one of the tritest remarks that could be made touching the field of secondary education. All high-school teachers are positive of its truth and all up-to-date college men admit it with about the same vigor and impatience that the clever writer of the Joysome History of Education exhibits when he admits the intellectual equality of the sexes. Yet this educational commonplace will not down. The persistence of its recurrence seems to suggest that many there are who believe that it has a real and vital function to perform in connection with modern educational policies, in other words that the charge of domination of the high schools by the colleges is well founded. The present writer is prepared to maintain that in any legitimate sense of the word the college has never seriously dominated the high school in the determination of curricula or otherwise since the latter was born.

Not only are the colleges accused of unwarranted domination of the high schools, but because of such supposed domination they are held accountable for the shortcomings of the high schools in meeting modern standards of social efficiency. We have heard and read much of late to the effect that the college through its requirements for admission is responsible for the failure of high-school work to function adequately in the real life, present and future, of the students. No attempt will be made in this paper to determine to just what extent these charges of social inefficiency in the high schools are actually true, but attention is called to the fact that leading high-school people constitute a large proportion of those who are most vociferous in advancing the charges. This is in itself sufficient evidence that there is some considerable truth in them. A prominent high-school principal writing in the Outlook for December 11, 1909, after graphically reviewing what he considers the failure of the high school to fulfill its proper function in American society by reason of its limitations in courses offered, in range of studies, and in the content of the latter, comes to the following remarkable conclusion: "For all this the college, and the college alone, is responsible." A writer in the World's Work for May, 1909, complains of much the same inefficiency in an article headed "How the Colleges Ruin the High Schools." In years past the same views have been frequently expressed in educational periodicals and at educational gatherings. The High School Teachers' Association of New York City is now engaged in widely circulating a brochure in which they make a request that the colleges admit high-school graduates simply on a certificate of graduation, all on the assumptions that this full concession would free the high school from bondage and that as a result the high school would thenceforth fulfill its true function in society. While most heartily sympathizing with the high schools in their endeavors to enrich and modernize their curricula and activities, the present writer is logically constrained to defend the colleges on this count also.

In an attempt to make good this implied program of things to be done, attention is respectfully called to three chief considerations pertaining to the points at issue. The purpose is to show that the authorities in charge of our high schools can not justly shift the burden of responsibility for the character of their curricula or for social inefficiency in their schools, nor any considerable proportion of such burden, upon the colleges.

In the first place the relations of articulation between high school and college are in general purely voluntary on both sides. The high schools, if they choose, have full freedom to adapt their courses and methods primarily to the needs of the overwhelming majority of their students, those who do not go to college. Neither the college nor any other power forces them to adopt the alternative of catering primarily to the interests of a small minority. In general high-school authorities have the power to mold the work of the high schools in accordance with college requirements to just the extent they see fit; the college can not authoritatively dictate in the slightest degree. The general facts in this connection are so obvious that further argument would be merely carrying coals to Newcastle. High-school people in their controversies with the colleges openly proclaim that the alternative just stated is actually adopted, but by some species of logical legerdemain they convince themselves that the responsibility rests primarily upon the colleges that have the temerity to require certain attainments of the relatively few high-school students who knock at their doors for admission. Many college men, particularly those whose special interest is educational science and art, would welcome independent action on the part of high-school administrators which would result in a large reduction of the influence of college entrance requirements in determining

the character of high-school work, since they realize that such action would mean a corresponding increase in the social efficiency of the high schools. The colleges would not be slow to make necessary adjustments to the new order in their requirements for admission. The present situation is characterized more accurately as servility of the high schools than as domination of the colleges.

Secondly, the high-school curriculum and the general characteristics of high-school work are partially the result of direct imitation of the college. It is a matter of educational history that, in general, secondary schools have sprung up in the wake of colleges and universities. In many cases the distinct motive for their establishment was preparation for college. In other cases it was preparation for life, and in more modern days this has been avowedly the primary purpose in the establishment and maintenance of all save a very few secondary schools. But tradition and the dogma of formal discipline, to say nothing of other factors, have persistently confused men's minds in the adoption of means to this end. The selection upon correct principles of the proper material and processes for the education of youth during the years ordinarily spent in the secondary school is an extremely difficult task to which no one has yet been equal. Under these conditions one could have predicted with assurance that the high school would imitate its superior and predecessor to a very considerable extent, since men are invariably prone to adopt this expedient when forced to act in an uncertain state of mind. A detailed comparison of the curriculum of the high school and that of the college in the light of educational history and the psychology of imitation is all that is necessary to convince the average individual competent to judge that the one has been largely modelled after the other. As a matter of fact, is it not true that high-school authorities have patterned after college authorities to just about the same extent to which the high-school student imitates the college student when he has a model to observe? While this picture is believed to be strictly correct in reference to the past, it must be qualified by the statement that there is a growing disposition among high-school people of the present day to attack their own problems in a scientific way without reference to college precedents. Yet the role of imitation is still considerable. The important consideration in this connection is, of course, the obvious fact there can be no element of domination or compulsion in imitation, unless perchance it be the lack of initiative and inventiveness on the part of the imitator.

In the third place, the new field of educational economics will be drawn upon to indicate what the primary, though not the sole, forces really are which have been responsible for the limitations, past and present, in the social efficiency of the high school as well as of other educational institutions high and low. These primary causes are certainly not the domination of any type of institution over another. The whole matter is fundamentally an economic proposition. Centuries ago when the essential lines of the modern so-called cultural curriculum were established the means available for educational purposes were very limited. The per-capita wealth of society was very small. Naturally therefore a type of education was adopted which would require only a small material outlay; viz., education from books based chiefly upon memory processes. The studies which by common consent became established in educational tradition, chiefly Latin, Greek and mathematics, were naturally among those which can most successfully be pursued along these lines. Parallel with the development of art and science and the progress of discovery and invention there proceeded a corresponding industrial and economic development involving a constant increase in per-capita wealth. Thus the means available for those things in life which are relatively accessory, including education, gradually increased until at the present time they are comparatively abundant. The fundamental, though not exclusive, reason why education has been so limited in the past in the elementary school, the high school, and the college is the fact that society could not afford a better type, and the primary reason why education is expanding so splendidly today is the fact that we can now afford to provide those expensive facilities which increase educational efficiency and productiveness. The new features of education which contribute to the increase of social efficiency and which are being introduced for that purpose, viz., manual training, domestic science and art, laboratory training in science, and particularly the various aspects of vocational education are very much more costly than the old features both on the side of adequate equipment and on the side of adequate teaching services. It is fundamentally because socially efficient education is so expensive that high schools have been slow to incorporate adequately these new features, not because of any serious domination by the colleges. The old-line education is cheap, hence those in control of the high schools and the colleges alike have been loath to displace it. Had the material resources of society been developed to their present abundance three centuries ago, the present expansion of education toward social efficiency, with certain qualitative differences no doubt, would have occurred just about three centuries ago. For the reasons here given many boards of education and school administrators have been only too willing to accept the conventional requirements of admission to college as the standard for fixing the essential lines of their high-school curricula. It must be said, however, in all fairness that when they have found it incumbent upon them to explain their policies they have often used the college requirements as a sort of scapegoat.

From these considerations it seems quite clear that the immediate responsibility for remedying the weaknesses in secondary education we have been considering rests with the high schools themselves, not with the colleges. The colleges are responsible for the weaknesses only indirectly and partially. Direct responsibility for reform rests where the like responsibility for conditions needing reformation rests. High-school authorities

have no right to expect to secure adequate readjustments either by berating or by appealing to the colleges. It is their business to take the initiative, and many of them have begun to do so. The furtherance of such action in some small way, the actual application of the facts and principles presented, is the ultimate object of this paper.

It may be urged of course in this connection that the college is equally culpable with the high school in this matter of social inefficiency. The ordinary college of liberal arts or liberal culture is of course the institution in mind here. Though the answer to this charge could prove nothing either way with reference to the question of domination, yet it is well perhaps to say a few words at this point in an attempt to clear up the issue, since it naturally arises in this connection. It is freely admitted that the large majority of colleges are equally culpable with the typical high school, except in so far as vocational training is included within the meaning of the term social efficiency. Vocational training does not belong in the sphere of the college of liberal arts. The true function of the latter is to prolong the early period of plasticity, to postpone the day of specialization, to provide a truly liberal education in accordance with the ancient Greek ideal for the benefit of those fortunate individuals who can afford these luxuries. Vocational training of college grade belongs to the special technical school and to the professional schools of the university, and here it is offered effectively. The university, therefore, it may be added, can not be accused of social inefficiency with respect to vocational training as can the high school, where little or no provision is made for the vocational efficiency of the great army of unfortunate youth who can not go to the university, and the almost equally large number who have not the means, the ability, or the inclination to complete the college-preparatory course. With the above qualification it is doubtless true that the great majority of colleges are open to the charge of inefficiency in much the same way as the high schools. Many of them seem to be administered on the basis of the definition once given by a famous man to the effect that a college is a place where nothing useful under the sun is taught. The liberal education rightly understood, however, is in no way opposed to utility as such; it is opposed to vocational specialization. It is difficult to see how the acquisition of a wide range of useless knowledge and habits is more consonant with liberal culture than the acquisition of an equally wide range of useful knowledge and habits.

The extent to which, in the writer's opinion, college entrance requirements apart from other considerations should control in the determination of high-school courses has been suggested in the foregoing remarks. In brief general terms, they should control, apart from other considerations, only to an extent fairly proportionate to the number of students preparing for college. This generalization is believed to be applicable not only to the large high school where a number of separate courses can be offered, but to the small school as well where only one course is feasible. The small high school represents of course a peculiar problem in this connection, but there seems to be no valid reason why the same principle should not control in its case. The application of the principle does not necessarily mean a wide divergence from the usual liberal course offered in such schools; it means simply that the interests of the large majority rather than those of a small minority should control. A course of liberal culture, arranged usually however without primary reference to college entrance requirements, is doubtless the course best suited to serve the interests of the students in the aggregate in many small communities.

The preceding generalization at once raises the subjoined question used in substance with telling effect by the High School Teachers Association of New York City in their present campaign: What about the student who for economic or other reasons enters high school with no intention of going to college, hence pursues a course not leading to the college gates, but later changes his mind? The most satisfactory answer the writer has to offer is the following modification of a statement once made by President Judson: Every course of study in every secondary school should always lead directly to some course of study in some institution of college grade. This statement sounds very well as an abstract principle, but it is very difficult to put into practice under present conditions in America. A college of liberal arts can not reasonably be expected to admit students who have pursued a vocational course in the high school to candidacy for a collegiate degree on the same terms as those who have pursued a course in harmony with college principles and ideals. Contrary to the apparent beliefs of the high-school teachers of New York City, students can not be admitted to college courses regardless of the nature of their high-school training. Moreover the professional schools of our universities are demanding much the same high-school preparation as the college of liberal arts; indeed many of them require in addition a more or less extensive college training. They refuse to accept vocational courses directly in line with their own work as proper preparation. The university professional schools are doubtless in the right in this attitude. Recognizing that their business is to supply society with professional leaders, they realize that they must select as well as train. They are well aware of the ill effects of early specialization and of the desirability of a fairly extensive liberal education as a basis for professional training and service. They realize, moreover, that the requirement of a liberal education at least to the extent of graduation from high school is a very important selective agency for their purposes in serving society. The most satisfactory solution of this problem seems to be the establishment of technical schools of college or sub-college grade where the youth whose misfortune it has been to have a home environment requiring or permitting specialization in the high school may gain advanced training in his chosen calling at any time after the completion of the secondary course. The completion of a vocational course in the high-

school should admit to the corresponding technical school. Technical schools of this sort have been established in Germany, France, and other European countries to meet a situation similar to the one we have been considering with reference to America. In the coming years, as European conditions of life are approached more and more, such schools will certainly be established in our country in large numbers. We may as well make up our minds on this point. Social conditions are beginning to demand such institutions and we have abundant material resources to meet the demand. Their establishment will go far to eliminate the chief difficulty at present encountered in providing satisfactory articulation between secondary and higher educational institutions. Another solution of the same problem is the provision of two parallel courses in the professional school, one for graduates of the regular college-preparatory course of the high school, the other for graduates of secondary vocational courses in line with the work of the professional school. The first course would be the ordinary professional course based upon a liberal high-school education. The second course would contain some subjects of liberal culture in place of some of the elementary professional work. In other words the second would aim to provide for the student the work he did not get in the high-school by relieving him of work which he did have there. The first course is obviously preferable to the second. This solution seems feasible, though various sound objections could be raised against it. It would require much more co-operation between secondary and professional schools than has yet been realized.

The present want of both the higher technical schools and the system of two parallel professional courses, however, does not justify the organization of high-school curricula on the assumption that most students are going to college. The introduction of subjects and courses more closely related to the more immediate demands of life will no doubt result in misadjustment and waste in individual cases; but it is the balance of losses and gains, the principle of the greatest good to the greatest number, that should control. Large considerations of educational economy require that college entrance requirements shall no longer remain the controlling factor in high-school courses.

Prof. C. B. Pennypacker, principal of the York High School, followed with a paper on

COLLEGE ENTRANCE REQUIREMENTS AS A CONTROLLING FACTOR IN HIGH SCHOOL COURSES.

In considering the Latin Grammar School of pre-Revolutionary times, the academy from the Revolutionary period to the time of the Civil War, and more recently the public high school, as dominant factors in one educational system, along with the elementary schools of these several periods, we find a historical reason for the controlling influence of the institutions of learning higher up—for educational progress seems to be from above downward.

In tracing this order of development, Brown in "The American High School," pp. 29 and 30, says: "In our educational system the colleges and elementary schools developed before the high schools. The colleges extended downwards into the Latin grammar schools as preparatory schools. The elementary schools extended upwards into the academies, and later into the high schools as a means for the extension of a general, practical education. But neither the grammar school, the academy nor the high school was at its origin regarded as the connecting link between the elementary schools and the colleges. That relation was an after-thought which the State University of Michigan did much to make effective. It is now clear that in the nature of things, the free public high school was the only one of these three institutions which could survive and perform this function. It only could serve the whole people, the rich and the poor alike, equally well those who desired to prepare for college and those who did not." As a result of the efforts of the University of Michigan we have the advocacy and promotion of the "certificate system" of admission to higher institutions of learning.

This doubtful favor, since it meant obligation to the college but popular recognition of the high school by institutions higher up, along with the so-called "Haverford system," fixed for a time at least the quantity, quality and kind of work expected of the high school, irrespective of the original and more recent claims that the high school is "The Peoples' College" and must be a "finishing" school for life rather than a "fitting" school for college.

Other influences at work in making it easy for the college to dominate the high school through entrance requirements have been outside help in selecting their studies and standardizing them—gladly given by the college—the employment of college graduates as high school teachers, and the common opinion of high school teachers, for too long a time, that what high school work was required as preparation for college was also a good preparation for life.

From whatever point of view we consider the college as a controlling factor in high school work we are all grateful for the past help given the high school by the college, and even more grateful for the help rendered to the college by the high school. But we seem to have outgrown the domination of the college through a recognition and conviction that the high school must be administered for the greatest good to the greatest number who attend the high school and are dependent upon it, rather than to prepare a few for college, which must be incidental and not the goal. "Education for efficiency," which should be a good preparation for college, is now the slogan of the high school. The feeling at present that what prepares for life should prepare for college, is the basis for a better adjustment of secondary education to college work and collegiate needs.

Appreciating our indebtedness to the college for the educational service rendered in the past and hopeful for a better and a saner

leadership in the future, growing out of changed and changing educational aims; mindful of the many concessions made by some colleges and universities in favor of the purpose of the high school outside of preparation for college, it would seem strange for the colleges not to heed the universal demands of the secondary school by permitting it to more fully control its own affairs and more fully to adjust itself to ever-changing, social conditions, and the more practical and far-reaching educational needs of ninety-five per cent. of high school pupils. Give the high school people a chance for some time to work out their own problems, and I assure you the college will not suffer as much educationally as the high school has done under college domination.

Influenced by the college which shares our fate in educational content, we have been upholding and promoting some educational traditions of a thousand (1000) years for disciplinary reasons, forgetting the pedagogical principle that not content but method determines educational discipline. What educational sinners we have been in permitting our educational content to be determined by tradition rather than by reason and the educational needs of the greatest number growing out of ever-changing social conditions. Herein lies the proposed lead of the secondary schools.

It could be shown, if time permitted, how both the college and the secondary school have been influenced in content by the several educational movements, such as the linguistic, the mathematical, the scientific, and the more recent movements not yet fully utilized, without properly making this content minister to the highest educational and social needs of all the people. The content has been appropriated in whole or in part by the schools and colleges, not for the greatest benefit to the greatest number but more especially to benefit and prepare the few who go to college and who later lead professional careers which savor of class education rather than the education of the masses, both in the selection of the content and its organization for educational purposes.

What the secondary schools propose to do is to so modify the traditional content and to so appropriate the more recent content in reorganizing our work that the present day needs for educational efficiency may be vouchsafed to all our young people in the high school. The reorganization may mean only a better adaptation and correlation of our work to accomplish certain desirable educational aims, or it may mean a more radical process of elimination, following such principles of elimination as suggested by Dr. McMurray, who would have our curricula eliminate what is not useful, to eliminate all that is not capable of being related to other knowledge, all that is not within the comprehension of the pupil, and all that is not interesting.

To be more explicit let us think of the mathematical content of our high school course of study and select for illustration algebra than which there is no more specific college preparatory study. We are teaching this branch, in its present form, as a college preparatory subject without much regard for its utility in the active life of a large majority of our boys and girls, when for the latter purpose we would be obliged to apply some principles of elimination to so modify or to so revise a splendid college preparatory subject as to make the subject more useful, more intelligible and more interesting to those who do not expect to pursue courses in higher mathematics. Utility here, as in other high school subjects, is sacrificed to content, in which we figuratively gnaw "content" bones with a result of poverty in thought life, which is evident in the realm of high school, and I dare say college mathematics, when it comes to applying algabraic processes and principles to real thinking in applied mathematics.

A reorganization is not only needed in the language content of secondary schools but in mathematics as well, if time and profitable study are not to be sacrificed in college preparation, which should be used and could be used in pursuing studies with a richer thought content, more conducive to a richer preparation for life. Let us be honest with our constituency and show them the futility of some of the work we are doing in preparing their sons and daughters for life, and we shall have an additional help in promoting the reorganization of secondary education.

All this means an educational adjustment to educational aims, and in a large measure the modification of college entrance requirements so that a preparation for college is a preparation for life in accordance wth present secondary school demands. If this purpose of the high school can not be accomplished in conjunction with the college, a separation will take place and the colleges will be obliged to prepare their own students or to find other schools to do it for them. The high school must fulfil its mission to the whole community and the college can, if it so desires, assist to the same end—the aim of the college as well as of the secondary school must be efficient men and women in all walks of life rather than inefficient scholars—for to do is better than to think and not to do.

Secondary schools as finishing schools are frequently brought into disrepute because of the inefficiency of their graduates when they are sent out to meet the demands of active life. This inefficiency, in part, is traceable to the narrowness of high school courses of study, which are largely, too largely, determined by college entrance requirements. A brighter day is dawning for secondary schools and their product under their own leadership.

In a pamphlet, recently issued by the High School Teachers' Association of New York City on "The Articulation of High School and College or the Reorganization of Secondary Education," the question at issue is briefly and definitely stated, and a modification of college entrance requirements as a factor in high school work is demanded. In concluding this paper, which is necessarily suggestive rather than exhaustive, I can do no better than quote from the introduction of this pamphlet. The committee who made the study and prepared the report suggest two methods of improving the situation now existing between the college and the high

school. "This committee made a detail study of the entrance requirements of a large number of colleges and drew up a statement setting forth the impossibility of wisely meeting the needs of our high school students on account of present college requirements." The methods suggested are:

"1. By the first method college entrance would be based upon the simple fact of graduation from a four-year course in a first class high school. The method would give complete satisfaction to the high school. If supplemented by competent examination into the efficiency of each school, we believe this method would tend to develop within the high school that independence, breadth and judgment required to produce the best results. The improvement in the high schools would result in better preparation and more students for the college.

"2. The second method, not as radical as the first, was proposed, in order that the high schools might derive as soon as possible some measure of relief from present conditions. This second method calls for:

(*a*) The reduction in the number of so-called "required" subjects, together with (*b*) the recognition of all standard subjects, as electives.

"The requirement of two foreign languages from every student is regarded as particularly objectionable."

If we are to eliminate or modify the quantitative, qualitative and antiquated college entrance requirements as a controlling factor in high school courses, the first method is reasonable and the second method is right.

Prof. William A. Jones, principal of the Easton High School, regards this a minor issue, with little to debate. The colleges have the right to insist on any forms of admission they desire, but he doubts the advisability of asking too much. Pupils cannot always put on paper the best they know. Few students can do so. Passing an examination is not prima facie evidence of scholarship. Four years should not be judged by the results of one day's examinations. The colleges might better appoint a commission to examine into the merits of the various schools, and admit by certificate the pupils from those schools which reach their standard. But the whole matter is of minor importance. He had carefully examined the catalogues of forty-one colleges and found that, in order to meet their requirements the student would have to spend eight and one-half years in preparation. This is more time than is spent in the high schools. Representatives of the colleges should meet and decide on uniform requirements. Let them determine on two or four modern languages, so that they agree on something. There has been a recession in some instances in the point system. One college which formerly demanded seventeen credits now demands only fourteen and a half. This is an improvement. The certificate privilege is a minor factor. The difficulty is in the amount of work required. At one time the colleges were satisfied with one year of general history and one year of United States history. Now five large colleges demand that algebra, geometry, physics or chemistry, Latin or Greek, English and history shall all be taught during the last high school year, and below that the pupils should have a little music, manual training and other things. He thinks that the colleges are now getting worse prepared students in English. No less time should be devoted to this branch, but the instruction should be more practical. Students should write less stories and more business letters. "By all means grant certificates, but do not compel us high school people to stretch our consciences when we make our affidavits as to our work."

Dr. Fisher was again given the floor and said that he was not in sympathy with the present classification of high schools. A two-years high school may really be of the first class, while a four-years school may be of the third class. A great amount of work should be optional. There is too much time spent on mathematics in the colleges. There should be more original problems required. Neither certificates nor examinations are entirely satisfactory. In answer to a question he said that some parts of algebra might reasonably be deferred until the student enters college. Reduction of complex fractions might well be omitted. No student uses the process except in calculus. More attention should be given to practical problems. Most of the mathematics taught has no bearing on the life of most people, except engineers. Addition, subtraction, multiplication, division, the principles of percentage—these are all that most persons need to know about mathematics. He urged that the teaching of "Why?" should not be neglected. We are not teaching pupils to think as we ought, in either college or high school.

Question: Why does the college you represent require five periods per week for four years in the subject of history?

Dr. Fisher: The requirement is not less than four periods; five periods are preferred. In the opinion of the professors of history, no less time will give the necessary amount of knowledge and mental training. If any school can do the work in less time we stand ready to accept its students after examination.

Question: Are college entrance requirements the work of a committee or the demands of individual professors and heads of departments.

Dr. Fisher: I am not ready to speak on that subject from experience.

Prof. Whitteker: Friend Fisher in his paper laid considerable stress on the voca-

tional side of education, and I gathered from it that he wished to intimate that that phase of education has less cultural value than some other of the college entrance requirements. I call to mind the record of the Northeastern Manual Training School, of Philadelphia, as related to the cultural value of manual training. Three years ago eight graduates of this school were on Dr. Fisher's faculty. The Central Manual Training High School is also represented in the faculty of the University of Pennsylvania, and one of the most forceful men now in the department of English is a graduate of that school. Not more than five or six years ago an academic institution graduated a class of 51 students, and boasted that through its influence, one-third of its graduates went into law—a profession which produces no wealth. On the other hand the Manual Training Schools of Philadelphia graduate 2½ per cent. into law; 2 or 3 per cent. into the ministry; 3 to 5 per cent. into medicine; 4 or 5 per cent. into teaching, and the rest all go into the activities of life. Of the graduates of the Northeastern Manual Training School, under the influence of the faculty, one-third to one-half go into higher institutions of learning. I think that a very high percentage. The head of the departments of English in the Northeast Manual Training High School is a graduate of that school and of the University of Pennsylvania. The heads of the Department of English in two St. Louis High Schools are graduates of Manual Training Schools.

Dr. Schaeffer: I should like to know how many hours of shop work are assigned to students of manual training high schools?

Answer: Twelve to 15 hours per week.

Dr. Schaeffer: We have been told that students who take manual training courses usually spend 33 to 36 hours a week in class exercises. How many units does this give them for college entrance?

Answer: The school day is divided into six recitation periods. The session lasts from nine o'clock until two, with 25 minutes for lunch and 15 minutes for opening exercises. Four periods a day are devoted to academic subjects and two periods to certain phases of manual training including art and work in the physical laboratory—five days per week.

Dr. Schaeffer: I have been led to doubt the value of three-year courses. It has been reported to me that the students take chances on their recitations. There are so many classes that it is impossible for them to prepare for all of them. I should like to ask whether the successful manual training graduates, who were mentioned here today, were successful because of their training or in spite of it.

Answer: Last fall seventy-five scholarships at the University of Pennsylvania were thrown open to the students in the Philadelphia schools. One-third of the scholarships were secured by students in the school with which I am connected. One-half of this one-third were secured by students of the manual training course. The questions were made by men of academic training, and, as a rule, the students were given no opportunity in the examinations to show their knowledge of manual training. Another similar school took some of these scholarships. Could you get a better value for money expended than these courses offer?

Dr. Schaeffer: The Carnegie Foundation fixed a half-unit value to manual training. I thought that very small. What would be a just rating? When you have an old established school, there is apt to be in the faculty a number of old teachers who no longer have much enthusiasm to put into their work. When a manual training school is started, young and enthusiastic teachers are secured, which perhaps accounts for the success of the students, rather than the course itself. I believe the Manual Training High School in Philadelphia has better teachers than the Central High School.

Question: Is it not possible that the success of these manual training students is due to the fact that better and more sensible boys elect better courses?

Dr. Schaeffer: The average Philadelphia boy takes the shortest course and the one which will prepare him best to get money.

OUR CONFERENCE AT STATE COLLEGE.

Prof. W. S. Steele, principal of the Harrisburg High School, reported to the Department the results of this conference. Thirty or forty high school principals who send students to State College were invited to visit the College at the expense of that institution—that the college professors and high school people might touch elbows and exchange ideas. The high schools take the boy as he comes from the grades, crudely developed. They turn him out with a diploma. All diplomas look alike. We do not suggest that the boy is fit for any profession or has ninety per cent. of brains. We should annotate the certificates sent to the colleges. The boy who has 75 per cent. brains and has made the most of them should have the same chance as the boy with a 90 per cent. brain who has not done so. The colleges get the boys after they have passed the age of adolescence, when their minds are partly aroused to what they are and what they may become. The college professors do not always think the boy adapted to the course he elects, but we do not dictate to him what that course shall be.

At State College we were splendidly en-

tertained. We had lodging and breakfast in the homes of the professors. We dined in the domestic science kitchen where we learned what the college does for girls. In pleasant conferences we carried on informal discussions of the questions debated on this floor to-night. We did not solve them, and there was great diversity of opinion; but the college professors and the high school principals became more of one mind on some things. President Sparks said that State College is partly supported by the State, and therefore its doors are open to public school graduates. The curriculum is for the masses. Therefore State College is willing to meet the high schools half way on any questions of just college preparation. He has no quarrel with college entrance examinations. There are enough colleges for every boy and girl who desires a course to find a school to his liking. A graduate of the Harrisburg High School graduated at Princeton with highest honors. Williams was fussy this year and unwilling to accept the Harrisburg High School certificate. The speaker continued, "If they can't accept our certificates, what are we here for? If we cannot tell who are fit to get through college, who can? Send your inspectors to study our schools and then ask us if the students have done the required work well. After we have had a boy for two years if he shows no ambition or improvement it is time to put him out. Why do not the colleges do the same?" The question of English was also discussed at the State College conference. The consensus of opinion was that the course in English is right but that the method is sometimes all wrong.

TUESDAY MORNING.

THE devotional exercises were conducted by Rev. Herbert W. Westwood, of the M. E. Church, Steelton.

The session of the morning was turned over to the Mathematics and Science Section, and was presided over by Prof. Ben. C. Graham, of the Pittsburgh Central High School.

The paper on "Elementary Science: Its Value and Place in the Secondary School" was to have been prepared by Prof. E. H. Schuyler of the Central High School, Pittsburgh, who died before it had been quite completed. It was read by Prof. Edward Rynearson, Director of High Schools of that city, who spoke as follows, with deep feeling, of its author, his personal friend:

"Prof. Erwin Harrison Schuyler was looking forward with much pleasure to this meeting. He practically completed his paper on Saturday, Nov. 19, was at school the following Monday and boasted of his good health. He died the next Sunday of double pneumonia. During his delirium he delivered the paper I shall read to you and then anticipating your inquiries, he discussed it in greater detail. You cannot appreciate my feelings as I read this paper, the last work of one of my most intimate friends. Prof. Schuyler was only thirty-seven years of age when he died. After his graduation from Syracuse University he taught in the Ives Seminary in New York, and later in the Erie (Pa.) High School. For six years he was professor of chemistry and physical geography in the Pittsburgh high school, and last June was elected head of the Academical department. His genial manner, his transparent honesty, his broad scholarship, and his sterling character won the co-operation of his fellow-teachers and the good-will of the student body. His career was phenomenal. He had never had any experience in executive work, but he bent all his energy and ability to his new task, and when school opened in August he was ready with full instructions for each teacher. If you had seen the smoothness and promptness of the organization on the first day you would have thought that he had had many years of experience in this work. In his death this Association has missed much inspiration that would have come from contact with his strong, light-giving personality."

ELEMENTARY SCIENCE: ITS VALUE AND PLACE IN THE SECONDARY SCHOOL CURRICULUM.

The term "elementary science" as used almost universally among secondary school men means a course in general science, and is usually given in the first year of the high school. It would possibly be better to call it "First Year Science." It is in this sense that I shall use the term.

Some knowledge of the natural sciences is now considered indispensable to an education. The useful information which they furnish, and the training in powers of observation, reasoning and judgment which they give have led to their recognition by all educational authorities. No longer is it necessary to contend for a place in the secondary school curriculum for some of the sciences. But there is practically no agreement with reference to science subjects as to what should be taught, when it should be taught, and how it should be taught,. In each large center of population the school authorities independently arrange their courses of study, and these are copied by the schools in the surrounding country in so far as equipment and teaching force will permit. We cannot agree as yet upon the year in which each of the natural sciences should be taught, to say nothing of the subject-matter. As an illustration, physics is taught in the second year in Boston and St. Louis, in the third year in Chicago and Pittsburgh, and the fourth year in Erie. Physical geography is taught in the first year in Chi-

cago, in the second year in Erie, and in the fourth year in Boston and Pittsburgh. Physiology, botany, and zoology are likewise placed in the different years. These differences are undoubtedly due to the history of the development of the secondary schools in the different cities, and also to the colleges that trained the science teachers. But do not these differences indicate that the science courses are not built upon a sound pedagogical basis? The first courses in science given in secondary schools were very general and elementary, and were taught entirely from text-books. Some may recall Steele's Fourteen Weeks in Chemistry, Fourteen Weeks in Geology, and such books. While much valuable information was obtained the courses did not prove satisfactory, educationally. Demonstrations were soon added and helped somewhat, but with the introduction of laboratory methods in about 1890 science teaching became revolutionized. The earlier general courses were gradually replaced by hard intensive courses in the several branches of science. So to-day we are giving one year academic courses in chemistry, physics, biology, and geology. Some high schools offer a second-year in these subjects. But within the last three or four years there has been heard a cry from the high school science teachers throughout the country asking for a course in general science to precede the well-established courses. The reasons for such a course are clearly described in a paper read at the Denver meeting of the N. E. A. in 1909 by Charles E. Peet, Professor of Physiography in the Lewis Institute, Chicago. Prof. Peet sums up the arguments for a broad introductory course in science in the first year of the high school as follows:

1. It is in accord with the nature or the high-school student's interests, which, "spread over a wide area, but do not at first extend deeply into any subject."

2. This plan is in accord with the methods of the best scientific investigation, which involves first a general reconnaissance of the field before taking up the detailed work.

3. It gives the student the broad outlook which is necessary for the most effective work in any of the sciences, and if wisdom is used in the selection of subjects and methods of presentation, it will leave the student with a desire for further work in science.

4. It gives an opportunity for the very large number of students who do not go beyond the first years of high school to get a look into the great field of science and introduces them to its methods.

Prof. Peet says also that among the things to which it should lead the student are:

1. A confidence in the testimony of his own eyes and ears.

2. A belief in his own good sense, in his ability to reason from facts to trustworthy conclusions. There is no one thing which should be encouraged so continuously.

3. A habit of stringing the significant isolated facts together in some orderly fashion, building up from them definite mental pictures and, in subjects lending themselves readily to this process, attempting to put these pictures in the mental cinematograph so that the actions of an agency of the cycle of changes in an object may pass before the mind's eye. Such an attempt is worth while even if it does not succeed fully.

4. A habit of testing quantitatively by rough calculations conclusions which can be so tested and in building up mental pictures from isolated facts, a habit of getting the right proportions by the same method should be cultivated.

5. The habit of attempting to see things in the large—of looking through the big end of the telescope and getting a perspective view of a thing in its entirety.

6. In addition to these things, such a course should leave with the student a mass of knowledge much of which should be continually used throughout life and be a satisfaction and pleasure to him, and, above all things, it should leave him with a desire for more.

Three years ago it was decided to offer an elective course of three hours a week in elementary science for one-half of the first year in the academical department of the Pittsburgh High School. Botany was then required throughout the first year. Prof. P. M. Dysart, head of the Physics Department, prepared a set of experiments for the new course. These experiments were taken from the work in physics with the exception of three or four dealing with chemistry and one or two with astronomy. Two hours a week were given for laboratory or experimental work which was made the basis of the course. References were made to and some lessons taken from Miller and Foerste's Elementary Physics. The results of the course, as observed by the proficiency of the students in later science courses who had taken it, were so satisfactory, that last year it was decided to replace the botany of the first year with an elementary science course extending throughout the whole year, four periods a week.

In order to arrange for this course Mr. Edward Rynearson, Director of High Schools, asked the heads of the departments of biology, chemistry, and physics to prepare outlines of experiments which they thought were within the comprehension and ability of first-year pupils. Later at a meeting of science teachers these outlines were discussed and revised. A committee, consisting of Miss Lewis of the biological department, Mr. Dysart of the physics department, and Mr. Masters and myself of the chemistry department, was appointed to prepare the manual. Of the former elementary science course much material was eliminated and chemistry and biology added. In Pittsburgh we have a well-equipped botany hall in connection with the extensive Phipps Conservatory. So it was decided that the biology of the course should be given at the botany hall in one hour a week. The chemistry and physics is given in the various high school buildings three hours a week, one laboratory and two recitation periods, to all first-year pupils.

In arranging the course all theory was eliminated as far as possible, and such experiments adapted as would lead to a little knowledge of a great many of the practical things of everyday life, and would also awaken interest in and stimulate an ambition to continue the study of science. The greatest problem of the

committee was that of elimination. There seemed to be so much good material to draw from. The manual, as printed, contains experiments which the committee believes can be successfully performed and mastered in two hours a week for one year. This is the basis of the course. A good text-book is at the present time our greatest need. We are using Miller and Foerste's Elementary Physics from which some lessons are taken, but it is not entirely satisfactory.

From a report of Prof. Otis W. Caldwell, of the University of Chicago, I infer that there are about thirty other cities that are developing courses in elementary science. Our course is an experiment. It is entirely unlike any of the others. Representative of different types of courses, I present the following:

At the Lewis Institute, Chicago, and in the schools of Columbus, Ohio, physiography is made the basis of the elementary science course. No individual laboratory work is done at Columbus. At Arlington, Mass., too, the general science course is chiefly physiography. Next year they expect to have extra laboratory periods and to include "an elementary study of plant and animal life, of physical phenomena and human hygiene." At the Philadelphia Manual Training and Commercial High School the general course in science is entitled Industrial and Commercial Geography. No laboratory work is done and there is little demonstration. In the New York State and also in the California schools, biology is made the basis of the elementary science course. In East Somerville, Mass., a biology teacher, a physics teacher, and a chemistry teacher give a course in general science by a series of lectures to the first year classes. No examinations are required. The course in the Girls' High School, Boston, is based upon elementary industrial chemistry, and some physics is taught. At Springfield, Mass., the course is largely one of elementary physics, with some chemistry and a little botany and zoology. Our course in Pittsburgh resembles that of Springfield, Mass., more than any other that I have named. Their course is based on the lecture and demonstration method, while ours is based upon individual laboratory work and necessarily includes less material.

The Pittsburgh Manual is written in as simple language, so as to make it easy for the pupils, as the authors could command. Directions for performing experiments are printed upon the left-hand pages as the book stands open, and questions with blank spaces for answers upon the right-hand pages. The directions for experiments are divided into parts and each part numbered. The questions are also placed under numbers which refer to parts of the directions or experiments of the same number of numbers. So there may be many questions under one number, all of which refer to the part of the experiment of the same number. This method is used throughout the manual except in the part given to biology which required some description as well as laboratory work.

[At this place Mr. Schuyler referred to certain experiments and subjects in our laboratory manual that he wished to embody in this paper. These subjects will be treated by the next speaker. I feel that Mr. Schuyler's paper should be given as he left it.—*Edw. Rynearson.*]

Prof. F. H. Masters, of the Fifth Avenue High School, Pittsburg, continued the discussion of the subject in the following paper:

ELEMENTARY SCIENCE: ITS VALUE AND PLACE IN THE SECONDARY SCHOOL CURRICULUM.

The last thirty years have seen a remarkable development along the line of scientific education. Before that time science was largely a collection of knowledge possessed by the teachers in colleges and universities. At certain times during the year dusty apparatus was dragged forth and a few simple illustrations were performed. These illustrations together with an exhaustive course of lectures constituted the work in practically any science. Now the colleges and universities have swung to the other extreme. There courses are highly specialized and research work is the order of the day. The result is that the subjects known as elementary chemistry, general physics, elements of geology, etc., formerly taught in the colleges, have been thrown back into the high school, which has been making an heroic effort to bear up under this burden imposed from above. It has been trying to teach an extensive body of scientific facts and at the same time give much training in scientific method to pupils a number of years younger than those of former years who were taught the above subjects in colleges. In attempting this the high school has undertaken a difficult task. The great majority of the pupils fail to get hold of the facts and are sadly lacking in scientific method. The reason for this has been a puzzle to science teachers in general.

May it not be a fact that this failure to do the work expected of the pupils in formal high school science, such as physics and chemistry, is due to the following causes:

First, the pupil, as a rule, is quite young and, as our courses are prescribed at present, is required to do too difficult reasoning when such power has not yet been developed, even in a small degree. Never before in his whole life has he been required to make clear distinctions and draw general conclusions.

Second, the average pupil has in his own experience practically no fundamental basis of facts and natural phenomena. Experience may never have taught him that he can secure an advantage in moving a heavy board by grasping it at the end rather than in the middle. He may never have noticed how a street-car is guided around a corner, but may think that the moterman steers it around in the same way that a chauffeur does an automobile. It should be borne in mind that the average pupil of sixteen has not paid much attention to the things that have been happening around him all his life. How then can we reasonably expect him to take up a course such as is prescribed for entrance by our leading colleges and do the work with much satis-

faction, either to himself or to those interested in him as a pupil?

The majority of science teachers in our high schools feel that the work in subjects such as physics and chemistry is very poorly done. They also feel that they cannot give, in one short year, a course such as is at present demanded. All science teachers of considerable experience have seen the truth of the following: A number of pupils come to us whose previous training has been identical, they all have been considered excellent students, and have made practically the same grades in their previous studies. We expect them to do fine work in, say, physics; but from the very beginning we see a great difference in their ability to comprehend the subject. A few do excellent work; some with much effort do fair work; and many seem to be hopelessly lost and to stay lost in spite of our most heroic efforts as teachers to make the subject plain to them.

What is the cause of this great difference in ability to understand regular high school science, when the pupils in all previous work have been practically equal? Is it not due to the fact that these students have had widely different natural experiences? Some have been quick to see every little thing that has happened, every little peculiarity; others have gone through childhood with eyes practically closed, and could not so much as tell you the color of the paper in their own rooms at home. So it would seem that the question just asked finds its answer in this: Many pupils have no adequate groundwork of experiences upon which to base formal high-school science, or if they have had such experiences they did not pay sufficient attention to them to fix them in mind.

A loud demand is being made by teachers of the sciences of the later high school years for a preliminary course in general, elementary or first year science. Many of them believe that such a course would give the pupil a broad basis of natural facts and experience in several divisions of science, such as physics, botany, physical geography, etc., with the result that he could do much more satisfactory science work in the later high school years.

It seems to me there are other very important reasons why such an elementary course should be given: In the first place, a great many, about thirty per cent., of our first year pupils, drop out of school before the beginning of the second year, or shortly thereafter. Many of these pupils have never had any instruction in science, not even in physiology. What right have we to allow a boy to go as far as the second year in high school without knowing something of the elements of a number of the sciences? Is it right that a boy should reach the age of sixteen in total ignorance of one of the greatest departments of human knowledge? It is true that many high schools teach botany or physical geography in the first year, yet there is a growing opinion that any one science at this stage of the pupil's development is too much specialized, to narrow in its application to his immediate and pressing needs.

Then, too, if the pupil continues in school he will be better able to do successful work in the more rigorous physics, chemistry and geology of the later years. Furthermore, having learned something of the elements of a number of the sciences he will be able to make a wise selection of further work in science. Many a pupil takes up work in physics or chemistry only to find after a short time that he is totally unprepared for that work. If he had had a preliminary course in the elements of several sciences, he would know that he has no ability in that line and could choose some other subject better suited to his taste and his work in after-life.

Again, the elementary science course affords a fine opportunity to discover the gift or capacity of each individual pupil. Since almost all of our pupils get their entire training for life, so far as schools are concerned, in the high school, is it not very important that they discover their gift or capacity early in the high school course rather than at its close? There are so many misfits in life that any little help the high school can give toward preventing them will be gladly welcomed.

Lastly, In practically every other department of high school instruction an adequate groundwork is first laid which is closely connected with the more advanced work. This is particularly true of English, Latin, and Mathematics. Is it not as sound pedagogically to give pupils a general, elementary knowledge of the field of science as to give them such knowledge in English, where language work precedes technical grammar and rhetoric? And then, again, we must bear in mind the fact that in the first year of high school the pupil's power of sustained attention is small. He cannot long keep his mind fixed on any one thing. He is always on the lookout for new experiences and unless they are forthcoming his attention wanes. He can study for four weeks to much better advantage four new things, each interesting in itself, than he can any one thing intensively for the same length of time. It is to meet this condition of his mind that we offer a course in the elements of several sciences rather than the elements of any one science stretching out through the year.

Having considered the necessity for a course in first year or elementary science, as well as its place in the high school curriculum, let us now turn our attention more particularly to the nature of such a course. The subject-matter for this course should be very carefully selected from three or four divisions of science, such as chemistry, physic, astronomy, botany, zoology. In Pittsburgh it was thought well to incorporate these in our course, because those studies would best meet the practical needs of our pupils, who represent almost exclusively a manufacturing community. This accounts for the large amount of physics and chemistry in our course.

The subject-matter should be closely related to the needs of the pupil and the common things in his life. Things the pupil sees and handles and talks about furnish abundant material for such a course. Yet, in the selection of this subject matter we are likely to make the mistake. Things that seem to be so common to us as science teachers, are by no means so common to our boys and girls. The

pupil is much more likely to notice movement or mass than phenomena; he has a great dislike, as we well know, for abstractions and precise definitions. If we give him one simple principle and twenty living applications, we are much more likely to interest him, than if we give him twenty principles and only one application.

The elementary science course should seek to give a large body of useful information, but great care should be exercised in the selection of things to be particularly emphasized. In many respects the interests of the country boy and of the city boy are different. The country boy is more closely associated with nature and her mysterious workings; the city boy is acquainted to a greater extent with things of man's construction. The country boy would be much interested in common pumps, for he would have need of such knowledge. He would like to know about the flowers, about the insects that destroy his crops, also why some water is "hard" and some "soft," as well as how to make the "hard" water "soft." The city boy is much interested in, why street cars run, where they get their heat, how artificial ice is made, how elevators are made to run, etc. It is evident, therefore, that the subject matter as well as the emphasis placed upon the various lessons should be, in large measure, determined by the daily experiences of the pupils and the conditions under which their lives are passed.

Mental discipline should not be over-emphasized in the elementary science course, for the course is primarily to give an interesting, extensive, and useful body of common facts. While the teacher should eagerly grasp every opportunity to improve the pupil's reasoning powers and to lead him to express himself in an intelligible manner, yet nothing should be embodied in the course solely on the ground of mental discipline. Everything that is not closely related to the life of the pupil should be excluded.

The development of a course in elementary science suited to all the various conditions of the different high schools of a city or large town is a matter of almost individual concern with that city or town. City high school authorities are constantly crying for more room and smaller classes. Laboratory equipment and apparatus are taxed to the utmost by the regular classes in science, and schedules are harder to arrange than Chinese puzzles. In many smaller towns it is a very difficult matter to get money for the equipment of laboratories for the regular science work, and any request for money for first year science would be looked upon with disfavor by the board.

The cost of introducing and maintaining for a year a course in elementary science such as we have in Pittsburgh should not be too large for the average high school. Exclusive of laboratory desks, gas, and water, the total expense for the first year will be between three and four hundred dollars. After the first year an expenditure of about seventy-five dollars per year would be sufficient to cover breakage and chemicals. In the larger high schools, where there are as many as six first-year classes, the same sets of apparatus may be used by six or by twelve different pupils. The difference in expense for a large high school and for a small one would be the additional cost of chemicals and glassware. Individual laboratory work is the basis of our course and consists of the following lessons.

The speaker then gave at length the subject-matter of their course in Pittsburgh—which may be had from the author—adding: Our course in many respects is far from perfect, but we believe we are working along the right line; and that, with careful revision from year to year our elementary science will steadily increase in value. A greater interest is being developed in our pupils in the objects about them in nature; they are using their eyes, and are quicker to observe resemblances and differences. There is an improvement in both oral and written expression, a better understanding of objects mentioned in other studies, and a quickening of mental power which ordinary school subjects do not give.

A Member: In the subsequent work of natural science is absolutely systematic treatment necessary to discipline?

Answer: At first our science teaching in the grades was purely informational. It was fragmentary, but it developed interest. Later a more systematic treatment grew up. Our present movement is in the right direction There is as much discipline in fragmentary study as in more systematic treatment. Especially so if the teaching is related to the life of the child.

Mr. Koch: To what extent do you go in method if a child does not know what an acid is?

Answer: We use the terms "acid" and "alkali." Before we introduce the terms we have experiments with acids and alkalies. Every pupil tests four acids and four alkalies. Each pupil knows how these tests are to be conducted. They know that a substance which turns blue litmus paper red is an acid. We apply this method in all our work. Five minutes are given, at the beginning of the period to explicit directions; then the pupils perform the experiment.

Mr. Adams: What effect does elementary nature study have on later formal study?

Mr. Rynearson: Our chairman has in his chemistry class some pupils who had nature work and some who elected Latin. He has had an opportunity to compare results.

Mr. Graham: Those who have had elementary science and have gotten some scientific methods of thought, grasp chemistry sooner. But there is a stronger argument for elementary science teaching. It gives the pupils an opportunity to decide whether or not they care for this line of work, before they take up formal study. The result is that the boys in our chemistry class this year do good work. Their election was wisely made.

Member: Two things. 1. If a science course is given in the first year in the high

school, which is also the time for geography, what will happen to geography? Will it be dropped? 2. Can a list of experiments be arranged equally valuable to boys and girls? Girls are not interested in the "why" of the trolley, or in heating systems. Nor are boys interested in the constitution of foods, and the chemistry of cooking. Is it not possible to fit the experiments to both boys and girls? Coming back to the supplanting of geography by science: Would it not be wise to give half the first year to each of these branches? It is just as essential to know geography as to know chemistry and physics.

Prof. Masters: We have so many boys and girls that it is impossible to give them different subject-matter. The same thing is true in mathematics. The fact that boys' and girls' interests differ would seem to point toward the segregation of the sexes. Boys and girls are interested in experiments with baking powder. Girls are interested in electric motors, electric irons, batteries and thermos bottles. I do not argue against physical geography. In the Pittsburg high school we have our physical geography in the last year. Pupils are better prepared for studying this branch after studying geology and physics and chemistry.

MECHANICAL DRAWING

The next topic was "Mechanical Drawing—Its Place and Value (a) In the General High School, (b) In the Special High School." Prof. A. M. Lindsay, of the Harrisburg Technical High School, was the first to discuss this problem, which he did in the following paper:

The history of Education in the United States tells us that schools were first called into existence by the needs of the community and fostered by experience. The needs or at least the wants of the community have greatly increased and the method of supplying them through the schools is taxing the experience of those concerned to the utmost. That the schools have existed and still exist is ample evidence that no better way of meeting these demands has been devised. At the present time so many subjects are receiving attention in the schools and others still waiting and claiming a place that the questions, Which shall we take? and How shall we produce the expected product? are of extreme importance. And we are here to-day in conference on some of these subjects, this one being Mechanical Drawing—Its Place and Value. (*a*) in the General High School, (*b*) in the Special High School.

It is becoming less easy to determine the questions of the place and the value of subjects in a curriculum since the needs are so pressing. Some beliefs of long standing are beginning now to be in doubt. For example, Is it true, as has long been held, that certain studies are peculiarly fitted to give mental power of a general character? Or is this true, that the educational value of a study varies with the interest with which it is pursued, and the consciousness of its value to the student? Dr. Snedden puts these questions and while they are too lengthy for discussion here, they are worthy of the most careful consideration in preparing a course for a high school.

Since mechanical drawing co-ordinates so well with geometry and is also useful by way of illustration and calculation in other branches of study, it should have a place in the general high school. The utilitarian side too offers perhaps the strongest inducement as it is more feasible to lay out a course and to execute it in this school than it is in manual training and technical schools where the work is at all times more or less interrupted by the call for shop drawings. Then too there is often local demand for it.

A General High School does no shop work and is attended by pupils of both sexes and has a four-years course. The question naturally arises, Shall all the pupils study it? Presumably the boys only; the girls may. It should be required in the first two years and elective in the last two. The program should be so arranged as to give the five periods of the week in two allotted periods, thus avoiding the undesirable short forty-minute periods.

As the pupils usualy have no preparation for this work, the first year's course should be preparatory and carefully graded so as to make the pupil able in large measure to help himself, give information in placing views, in surface development, in section work, in intersection work and in projection. No dimensions to be used and as little printing as possible, but that well done. For this work the geometric models are best suited. The pupils may each have a model or the teacher a large one. Give four weeks to tracing good drawings at the end of the term. The work should be done in lead and then inked allowing the leading pupils to make tracings while the slower ones are coming up. The year's work should give a good foundation. Pupils should know how to draw. If preparatory work below the high school is attempted it should be under special supervision so as to suit the high school work.

Since bolts are everywhere used, the second year's work should begin with the drawing of standard bolts. The actual development of threads should be taught, but the conventional method used afterwards as it is generally used in draughting rooms. Then should follow throughout this year drawings of single objects such as the sheave wheel both with web and spokes, cone pulley, etc. How shall this be done? Perhaps the best way is to supply the pupil with cross-section paper and a model. Have him measure the object and make a sketch free hand. The process requires thinking. This done he makes the drawing from the sketch using dimension lines as he learned in the tracings the first year. The drawing should be carefully done in lead and traced. This year should continue with some work in intersection of surfaces and surface development, the work of the first year.

The third and fourth years should continue

this work taking up first small articles of two or three pieces fastened together with bolts. Draw each piece separately and then assemble the parts. Mark each part and make out a bill of material. Do this as is the custom in draughting rooms. Let one pupil check another's drawing and the teacher approve. The measuring may diminish and some work be done from sketches obtained from books or otherwise. In the fourth year some machine should be drawn complete. I know of nothing better than an engine. Work in intersections and surface development of a more difficult character should be given. I do not favor much the plan of alternating drawing with something else on the program and stringing both out through the year. Surely though in the General High School is the place to prepare for the draughting room. During the last two years pupils may take up special lines such as structural or architectural drawing.

Taking up the second phase of the subject. I see no reason to question either the place or the value since both are admitted to be essential and occupy a prominent place not only in the special high schools but in night schools and correspondence schools. The main question seems to be to adapt this course of drawing to the special needs of these schools. Here is where the second question asked at the beginning of the paper presses for consideration. Surely there is much to be done in the special High School before the drawing work is on a satisfactory basis. If anywhere a boy has an opportunity to make his drawing work valuable to himself it is here. He has about him not only single objects but whole machines that may be measured sketched and drawn. But I presume it is safe to say that in a majority of these schools the pupils enter totally unprepared in mechanical drawing. How on the opening day of school they come to the drawing room! The drawing teacher feels and knows, if he be an experienced teacher, that they need nothing so badly as that first year's introductory work. The same week, perhaps the same day, these same pupils go to the wood room for work in joinery. They have no drawing of the object they are required to make. A drawing already prepared may be given them, but they cannot read drawings. They pass on into the sheet metal department and of course meet the same conditions. And then what? Perhaps the drawing teacher will be asked if he can get the drawings out. He knows he cannot. To make the drawings as fast as they are needed for these two rooms with pupils unprepared in drawing is an impossible task. There seems to be but one way out of this immediate dilemma. The shop drawings of the first year, or at least part of them, should be made by the drawing teacher and given to the shop men for use. The first of these drawings ought then to be made on 40″ × 48″ sheets of manila paper and used by the drawing teacher to explain to the pupils and the pupils taught to read them. This may have a few minutes every period until they can read drawings. Meantime the drawing teacher begins on the preparatory drawings. As soon as he has given as much of the work as will suffice he may start the class on the shop drawings of the year and complete as many as he can. But the more logical and more educational method by far is to have work in drawing in the grades below. Manual training work should lead up to this and should be taught in the grades. As suggested in the General High School, the preparatory work should be under special supervision and so arranged as to remove the impossible situation on entering the high school.

The situation at the beginning of the second year in the Special High School is about this: The pupil does pattern work and forge work in the shops and needs drawings. The pupil should measure the object, make a sketch on cross-section paper, draw with lead then trace. Again it is scarcely possible to get these drawings out as fast as they are needed, and the fact is many of them are well suited for the second year's course as outline for the General High School and therefore should be drawn. The whole difficulty would be removed by having the preparatory year's drawing done in the A Grammar Grade, and for their tracing work at the end of the term use the drawing of the first year's work in the high school. Then on entering the high school the first year's work could be taken regularly and finished and the second year's work on patterns and forge work started. This would relieve the situation at both places and give much needed time for the third year's work. As to the course itself, each shopman should lay out his own course and then confer with the drawing teacher. If things are not in progressive order a change may be arranged, and if some object is considered too difficult for pupils to draw, a substitution may be made or if the shopman feels that the piece is essential in his work let the drawing teacher make the drawing.

In regard to special pieces that pupils may wish to make, about the same course should be pursued. The shopman is the first to speak. He should say if the pupil has the ability and then confer with the drawing teacher as to the drawing. The pupil should have his drawing out with bill of material and cost before beginning the work. This is business-like. Nothing tends to work up the efficiency of the school so much as the working together of teachers toward the same end.

The third year the Special High School should continue the drawing work of the second year as in the General High School, drawing and assembling the parts. The measuring and sketching should continue but some drawings should be made from book or sketches prepared by the teacher, as much of such work is required outside of school. Boys enjoy taking a machine apart and examining it. Dr. Fager, principal of our school, is an enthusiast on this phase of the work.

I hesitate somewhat here, as what follows may seem critical, but I assure you it is not so meant and is given only because it is my sincere conviction and for the good of the subject.

The great need, as I see it, is for a standard of work, for more care in selecting the course, in sketching, in the placing of views and dimension lines, in the character lines used in

printing and in figuring, and in adhering to good draughting room practice. My friends, we teachers are not responsible for all of the things laid to our charge but for this one thing we are and should be held responsible, that of *clear presentation.* Aptitude to teach is essential. "Not knowledge alone, nor maturity, nor a faithful conscience can excuse inaptitude and want of skill in address and presentation," says Boone. Lord Bacon said, "The art of well delivering the knowledge we possess is among the secrets left to be discovered by the future generations." We need not endorse this in full, I quote it to make us think. Let us remember, however, that we are correctly judged not by the work we are able to do ourselves but by the results we reach in our pupils. Do we see ability developing in our pupils or are they constantly returning to us asking questions which we think they ought to know? Some one has said: The progressive teacher teaches less each succeeding year, his growth being marked, not by more things taught but by fewer things better taught. The time is not far distant perhaps when the general public will pass sentence on the technical schools of today. This makes it all the more imperative that we see to it that our work is of the best and done in the very best way.

On presentation, let us look at the beginning of the introductory course. Present the cube, the square prism and the square plinth in order. This is thought-producing and self-helpful. My observation has been that sometimes one object is drawn and then followed by another with very little relation to the former. This keeps the pupil constantly up against new things and he cannot go alone. Then *teaching* degenerates into *telling* and the pupil into a helpless dependent. "The best way to interest pupils is to give them something which they can do. They become enthusiastic over even hard work if they be not confronted at every turn with some new thing." I am much interested in this matter of clear presentation as a means of leading pupils to do things without help and therefore allow me another quotation from Herbert Spencer. I think it the acme of good teaching. It is from a little book on Inventional Geometry. "Though I did not myself pass through this work for I commenced mathematics under my uncle before this method was elaborated by my father; Yet I had experience of its effects in a higher division of geometry. When about fifteen I was carried through the study of perspective entirely after this same method, my father giving me the successive problems in such order that I was enabled to solve every one of them up to the most complex without assistance." My friends I call that teaching. So much for presentation.

Next how should this drawing be done? We hear much on this point. First the paper should be uniform and of three sizes. I like 9″ × 12″, 12″ × 18″ and 18″ × 24″. Time savers take the shortest way—that is, do the work in lead and neither ink nor trace it. Better be at something new than spend time over what they have already done once. That sounds well but the critic who condemns work that is well done because it takes time is only encouraging pupils to lose more time further on. The bane of our teaching to-day is that we leave things too soon. Just when a boy is getting a foothold in a subject we hasten only to find four weeks hence in a review that he is deficient. It has well been said "The lead pencil is the instrument of carelessness." The shortest possible way to make a drawing with safety is to make it in lead and then ink it or trace from the lead. We are in our school this year making a trial of doing our drawings in lead and tracing. Many of the boys are asking if they may ink their drawings if they do it at home. Drawing room practice is to do the work in lead and trace it. Personally I am not averse to inking the copy and then tracing. I find it does not take more than one-half more time as the work is more readily seen. To have any idea of keeping a permanent record in lead is not to be considered and the excuse that it takes too much time to ink is poorly founded. Let us remember we are establishing habits of work and it pays to do things well.

How shall the work of the term be kept? During the term in heavy envelopes. At the end of the term each boy should make a portfolio and put the work in a permanent form. A drawing should never be rolled. Its beauty is gone the minute it is rolled. The fiber of the paper is broken one way and by rolling the other way it is again broken leaving the paper crinkled and limp.

There is still another phase of this work, and again I hesitate on account of its personal and suggestive nature—the preparation of the teacher. Every superintendent and every principal knows the value of this. College courses are good. Summer schools are good, but, my fellow teacher and those who anticipate entering the work, if you have never spent any time in a draughting room do not let next vacation pass. Secure a position as a detailer and tracer preferably where both new and repair work are done. This gives variety. If you cannot get this take anything you can get. Carry your lunch, spend the noon hour going over the works into the foundry and pattern shop, on the scrap pile is a good place, in the vault looking over tracings, talking with some good man, go half an hour early occasionally and spend the time in the machine shop. Do not ask about the wages. Take what is given and make good, and you will go back to your school work in the fall with more that is valuable to you than any one year of your college course gave you. Buy an old engine from the scrap pile and have it placed in the basement of your school building, have the boys clean it up, take it apart and place parts of it in your room to draw and use in explanation and mark your success. To this experience add a two or three days visit to some schools where you will see the work in which you are engaged.

Mr. President, I sincerely hope next year will see a morning devoted not to formal discussion but to informal round table talk. Get the shop men here and the drawing teachers with superintendents and principals for audience and let us speak freely and exchange ideas. That will be fostering by experience.

I close with some suggestions I have printed on a card to give to the pupils: Care, accuracy, and neatness in every line, corner, curve, measurement, figure and letter. Everything is important. Make haste by giving undivided attention in class. Talk to no one except the teacher. Ask questions of him, not of the pupils. Do your work as carefully in lead as in ink. If possible never erase ink. If need be, do it lightly with a lead eraser and always use a shield. Be patient.

Prof. William H. Scranton, of the Scranton Technical High School, followed Prof. Lindsay, reading as follows:

I feel that mechanical drawing is a live and interesting subject, one which in the last few years has had more time and attention paid to it than heretofore in the high schools, and one which can aid in producing intelligent citizenship in the student, which is an aim of all education. From a technical standpoint mechanical drawing, whether as an art or science, is of great value to the architect or engineer as a direct means af conveying ideas to the mechanic. A report of the Pennsylvania State Commission gives an excellent interpretation: "For all material arts drawing is the language par excellence of a clearness, precision, and conciseness to which the language of words cannot attain. It is, then, an essential mode of expression and we get the direct comparison that mechanical drawing must be a starting point in almost all education relating to our industrial and technical world, just as language bears to academic instruction."

Taking up the divisions of this discussion as assigned, viz., The place and value of Mechanical Drawing (1) in the General High School, and (2) in the Special High School, it seems proper to give a brief description of the courses at present taught in the high schools of Scranton as presenting a definite example of the place this subject has in one city of the State. In our general high school, or what is known as the Central high school, mechanical drawing is required for half the sophomore year of all pupils taking the general course. This includes both boys and girls, the number of pupils in the class being about 90. The time allotted is three hours and forty-five minutes weekly, and the instruction covers theoretical problems in projections and intersections with several practical applications in working drawings of machine parts.

As to the value which mechanical drawing has in the general high school several points are apparent. It is about the only subject in which the pupil's hand is taught to work in harmony with his brain. It means a training of the eye to accuracy, to skill in the handling and use of delicate instruments, and has a distinct tendency toward the habit of neatness. The pupil's imagination and penetration must be developed, else how can he record his accurate impression of the form of an object he does not see? It seems well to quote from a report of Supt. W. B. Powell, made a number of years ago, and after the introduction of drawing and woodworking into the schools of Washington, D. C. He says of the candid opinions of his teachers, "'All concede that no academic loss has been sustained, the majority agree that a positive appreciable gain has been made in the academic studies. The majority report increased love of school, increased interest in all studies, better appreciation of what is taught and why it is taught, better understanding of the relation between what is taught and the affairs of life, and resulting therefrom, broader and more intelligent grasp. and constantly greater cheerfulness, and less disposition to consider the school as a place for tasks, and the teacher as a task-master."

Of course, the material value of mechanical drawing in the general high school cannot be pointed out as readily as in the special high school. Every teacher in the general courses, however, can pick out examples of pupils to whom this course has been the eye-opener, so to speak, as to what form of endeavor appealed to them strongest for a life work. Also, of numerous instances where a pupil after graduation, in casting about for that desirable thing called a "job," stumbled upon something where a knowledge of drawing was essential, and his future career was determined. And again, in the commercial and industrial life with which we are all more or less in contact and which is constantly becoming more technical, it would seem that that citizen who had the ability to at least read mechanical drawings would have an asset of material value. Probably but little difference can be noted in the number of pupils in the general or special high school who have chosen a vocation for themselves, but it is undoubtedly true that more of the students in the technical course expect to engage in some line of work where their drawing will be of a definite use, just as the students in the commercial courses believe that type-writing, for example, will serve some future purpose.

Now we come to a description of the courses taught in the Technical High School of Scranton. In the day classes all boys (at present about 120) in the manual training department are required to take mechanical drawing one hour and fifty minutes weekly for a period of four years, excepting those taking college preparatory work who omit the third year. The first year course has the usual projections and intersection of models, the theory on which projections are made being graphically shown by a cage constructed for the purpose; also problems relating to models made in the woodworking shop, and drawings illustrating standard conventions and embodying the necessary geometrical problems. The second year takes up some of the more simple problems in the designing of machine parts, measuring of foundry patterns and making the working drawings, scale drawings, tracings and blue printing. The junior year includes details of building construction, surface patterns, more advanced machine design, and other working drawings, and mechanical perspective. In the senior year we have architectural drawing, the theory and layout of gears, mechanical motions and a thesis drawing.

It will be seen that, to a certain extent, the work is correlated to the shop instruction given in woodworking, foundry practice, forging and machine work. This, of course, has an obvious value in teaching the essential relation which mechanical drawing bears to the mechanic arts. In order that the greatest value should be obtained by the pupil, one thing in the method of instruction is worthy to be

mentioned as paramount: The drawing problems should call for considerable individual thought on the part of the student. For example, a perspective sketch may be given with the dimensions, and the working drawings required to be made from it, or in the layout of gear wheels each pupil is given a different problem. A very small amount of the work is so-called "copy" work, and the drawings presented are for the purpose of showing line values and conventions.

To repeat a well-known quotation: "No thought can be healthy without labor, and no labor can be happy without thought." This point has its importance, not only from the educational standpoint of making the pupil think and cultivate initiative, but also for his ultimate success as a draughtsman. Early in my experience I found, from pupils who entered the evening high school, that making copies of drawings while seeming to produce wonderful results was quite disastrous. Many who desired advanced instruction presented specimens of drawing of a difficult nature, and showing considerable skill. But these same pupils when given a problem such as would frequently come up in draughting-room practice requiring that they conceive of an object in one or more views were almost invariabbly "floored." They had copied drawing without really knowing the significance of how they were making them.

Here I wish to make an appeal to teachers who are interested in mathematics. That part of mathematics, including arithmetic, algebra, geometry and sometimes trigonometry, which has a direct bearing on mechanical drawing and its allied mechanic arts, does not always seem to have all the attention which could be desired. Perhaps this is due to our inheriting certain methods; perhaps the general introduction of manual training is comparatively new: but from whatever cause the number of problems, in arithmetic particularly, should be increased, or the time spent on the problems that are directly related to manual training work should be greater. For instance, a pupil will have no hesitancy in saying that one-eighth of a dollar is 12½ cents, but often it appears like a new idea or at least a vague recollection that the decimal equivalent of "one-eighth is .125." A pupil going over any subject for the first time may gain a considerable knowledge of it but it must be left to his instructor to bring out the relative importance of the parts.

Many of the points of value in mechanical drawing in the special high school are generally spoken of under the inclusive title of "manual training" and are to be shared with the other subjects taught. It gives boys with strong mechanical tastes a chance to compare favorably with boys of quicker tongues and better memories. It awakens in many a boy a greater interest in school, and former dull subjects take on a new life. It has frequently been shown that it increases the attendence of boys in the high school. So far we have dealt with the value of mechanical drawing to the pupil. Let us now consider the value which the trained hand and mind may have to the community.

As Col. Augustus Jacobson says, "Youth is the expensive period of man's existence. Youth produces nothing and eats all the time. If the youth is not trained there can hardly be a profit to mankind on his existence. As mankind is liable for, and bound to pay his expenses, he should be so trained that he may repay the cost. He can only become a profitable investment by training. If he is left unskilled, the money spent on him is wasted. Mankind should be wise enough to reap the profit there always is in finishing the raw material, by making human raw material into a highly finished product." There is the profit to the employer of labor, on account of his being able to obtain boys whose attainments in mechanical lines is considerably higher than formerly. A graduate from the special high school has certainly the *capacity* for experience in the industrial world.

Of a more technical and specialized nature is the work in the evening high school. Here we come into direct touch with the mechanic and wage-earner. The course, of necessity, is of a most varied nature owing to the great number of trades and professions represented —machinists, carpenters, plumbers, sheet metal works, masons, blacksmiths, foundry men, electricians and many others. One of the members of the class was a stone cutter who wanted to design tombstones for everyone present. The time occupied is four hours per week for a period of twenty weeks. About seventy pupils enter and usually the course is open to any one who has completed a grammar school course. For those with no previous experience the work is identical for about four weeks until the theory and elementary principles of mechanical drawing are mastered. After this the course diverges into the various lines that are related to the individual's trade or work. Here the teacher has no particular necessity for urging on the flagging efforts of the pupil. In fact, it is necessary to hold some in restraint owing to their desire to tackle difficult problems before they are prepared for them. The value of this work is quite apparent —teaching the mechanic to read working drawings, to make drawings of what he has constructed, and to lay out the plans for what he desires to build, and increasing his value as a wage-worker.

Correspondence schools have their considerable field among workers similar to those who attend the evening schools, and it is probable that not a little of the success of this method of instruction may be attributed to the zeal of the students themselves, and to the fact that they have a sense of the value of this instruction relating to the work in which they are engaged.

It was once my privilege to hear the late Lord Kelvin define the object of education as being: 1. To make its recipient's life more happy; and 2. To increase his earning power. It is not too much to say that Mechanical Drawing plays its part in both.

Prof. Lindsay again taking the floor said that for some years he had aimed to lay out such a course as would bring about thought development and allow the pupils to work alone. He illustrated the order of presentation which he advocated—the cube, square prism, square plinth, and the same leaning at angles of 30 or 40 degrees.

Simple joinery comes in the first year. By this method the student at least knows how to draw, if he goes to work at the end of the year. At the end of the second year it would be a good plan for a boy to go to work if he cannot master our course. As to the time which should be devoted to drawing: I hold in my hand the first year work of one of our students. The work was first done in lead, then traced in ink. The pupils made portfolios and lettered them. In the second year a larger sheet is used. The same method is used—lead, ink, tracing, blue print. The method takes time, but it pays to do things well. We do not encourage much work on the cover, but a few pupils, who choose to do so, make elaborate covers. The senior work begins with a flange coupling, and the drawings are of a lathe. It is a mistake to roll drawings up, as they are soon ruined.

Question: How much time is devoted to first-year work?

Answer: The course in drawing covers three years, five periods a week. We so divide our work as to take three periods together on one day, and two on another day.

Question: Is the writing of the answers in the pupils' books supervised by the teachers? Do the results show that the students understand the work? I refer to their note books.

Answer: I first give a preliminary talk, and then the pupils go to work. While they are working I pass around the room and see if they are doing their work correctly.

Question: Are the answers given original with the students or does the teacher make suggestions?

Answer: As far as possible the pupils work independently. If they cannot fill out all the answers we question them, and lead them up to the truth.

Supt. Martin: As many pupils leave school before reaching high school age, would it not be well to put elementary science into the course in the eighth year?

Mr. Rynearson: I agree with the last speaker. The work could just as well be done in the seventh or eighth grade. Some schools adopt that method. If the schools were properly equipped, the subject could be better taught in the upper grades than in the high school. We do this because we feel that this subject would keep the pupils in school. This subject seems to relate to natural life. It especially appeals to boys. As to physical geography: Probably you are doing better work than we are. There seems to be a movement all over the country in this direction. Franklin, Greensburg and Sharon all have courses like this. As to Dr. Yocum"s remark upon the disciplinary value of fragmentary study: From my point of view what he says is true. It is not necessary for a subject to be disagreeable in order to have disciplinary value.

Member: Dr. Yocum's idea is fundamental. I have heard that in Germany applied subjects are taught in the elementary schools and elaborate theoretical work is given in the university.

TUESDAY AFTERNOON.

THE first subject on the program for discussion at this session was "A Rational Course in English for Pennsylvania High Schools." Principal A. E. Kraybill, of Johnstown, opened the discussion of the subject in the following paper:

A RATIONAL COURSE IN ENGLISH FOR PENNSYLVANIA HIGH SCHOOLS.

The subject implies that courses in English in Pennsylvania high schools may not be entirely rational. It further implies that one course may be enough, if it be a rational course. I am inclined to agree, provided this course be stated in sufficiently general terms to allow individuality to the teacher and adaptability to local conditions. A rational course in English for all Pennsylvania high schools must be flexible. A rational course in English for any particular high school must not be too rigid. The individuality of the teacher counts for more in English than in any other subject. The teacher of English "who waits to have his task marked out, shall die and leave his errand unfilled." It is not my purpose to outline a rational course in English but rather to suggest some important features of such a course.

English has a two-fold purpose. It serves for the expression and the acquisition of thought. Good English is "twice blessed—it blesseth him that gives and him that takes." The first business of language is to convey thought, and any form of expression that accurately carries the thought has the essential quality of good language. A sentence may be faulty in construction, spelling and punctuation may be poor, and yet if it correctly conveys the thought it is not entirely bad. It is, however, not all of English merely "to get it said." Language should convey thought briefly and concisely for economic reasons if for no other. The time alone required in reading and writing two pages for what might have been said in one, is an item worth considering. In addition to clearness and brevity, language may also have beauty and grace.

In the second place the study of language should enable pupils to get the thought from the printed page more accurately. A pupil often fails to solve a problem in mathematics because he can not or will not read it accurately. If pupils go out from our high schools unable to speak with reasonable correctness, to write a composition, or to interpret accurately the printed page, their training in English has been a failure, and the failure is almost complete because it has been failure in the essential purpose for which language exists.

In addition to this pupils on leaving our high schools should have acquired a taste for good literature and a love of reading. They should at least be properly introduced to that general knowledge of the field which enables one to appear to advantage in that part of society in which one can not well afford to appear to disadvantage. Our courses in English do not give the graduate the power to read, write, and speak as well as can be reasonably expected. Neither do they impart a very strong love for good literature.

This I believe is largely due to the fact that in English more than in any other subject College Entrance Requirements determine the nature of the courses. I have a great deal of respect for these requirements. In recent years there has been a more marked improvement in the teaching of English than in any other subject, not even excepting science. I believe that this is largely due to the College Entrance Requirements. But the final word on the subject has not yet been said, and it will not be said so long as pupils are expected to acquire a love of literature by studying Burke's Speech or Milton's Poems, if you please. Our courses in English, almost wholly determined by the colleges, are not meeting the reasonable demands made upon them. The influence of the College upon high school English must change or it must go. Ability to use the language is the first requirement of the high school graduate. An appreciation of good literature, the second.

Prof. Arlo Bates, of the Massachusetts Institute of Technology, takes his usual sane view of the subject of the classics in secondary schools, when he says: "All that can with profit be attempted in the secondary schools is to cultivate in children a love of literature and some appreciation of it—appreciation intelligent, I mean, but not analytic. I would have the secondary schools do little with the history of authors, less with criticism of style, and have no more explanation of difficulties of language and structure than is necessary for the student's enjoyment. In a time when the drafts made by daily life upon the attention of the young are so tremendous, when the pressure of the more immediately practical branches of instruction is so great, to add drudgery in connection with literature seems to me completely futile and doubly wrong. The supreme test of success of whatever work in literature is done in schools of secondary grades should be, according to my conviction, whether it has given delight, has fostered a love of whatever is best in imaginative writings and in life."

If I were a business man or a college examiner testing a candidate's training in English I should like to have ten minutes conversation with him. I should then ask him to spell a list of words, read several short selections to me, and write a composition of several hundred words on some subject from his personal experience. If he did this reasonably well I should consider him qualified in English to enter upon a college course or a business career. The same training is necessary and adequate for both. The course in English that gives the pupil the power to pass this practical test is the Rational Course in English for Pennsylvania High Schools.

The high school course should include spelling. Not merely spelling in connection with the other work but regularly scheduled class-room work at least once a week. College entrance examinations should substitute a list of words to be spelled instead of some of the unusual questions on the classics, that are far beyond the high school student, and I must confess sometimes beyond the high school teacher.

Many high school pupils would probably be very much surprised if told that reading belongs to the English department. Reading aloud, a great deal of it, by the pupils and sometimes by the teacher if he can read well, should be a prominent feature of the work in English—yes, even reading in concert, "after the manner of our forefathers."

Some form of Literary Society should be conducted by the English Department to afford drill in speaking. In this society music should not crowd out debate, which will always be, when properly conducted, the most valuable feature of the program.

Some high school courses pay very little attention to the study of grammar. They argue that pupils should know this subject when they enter the high school. I question whether they should. At any rate they do not. Parsing and analysis are becoming somewhat old-fashioned and diagramming is one of the lost arts. Before pupils can select the proper forms of words they must know their relations to each other in the sentence. I know of no substitute for analysis and parsing to give them this knowledge. They should know how to analyze and parse when they enter the high school, but they do not, and if they do, they should at least not be allowed to forget it during their high school course.

In touching the subject of composition one is strongly tempted to trespass beyond the scope of this paper. A rational method of teaching the subject is an inviting field. With reference to this I should like to make two statements: Do not expect a boy who is intensely interested in airships to write on the metabolism in the poetry of Browning. A teacher of English who finds the correction of themes too irksome is unworthy his calling.

The rational course in English for Pennsylvania high schools should include more spelling, more grammar, more reading aloud, more speaking, and more careful work in composition. But when shall we prepare our pupils to pass the examinations on the classics? The answer is simple. Don't do it. You have no moral right to do it. When "children whose highest acquirements in English composition do not and cannot reach beyond the plainest expository statement of simple facts and ideas, are coolly requested to discriminate between the style of Il Penseroso and that of L'Allegro, and to show how each is adapted to the purpose of the poet" it is about time that something happened. When a high school student glibly tells me that "Milton is the poet of sublimity" it is time that somebody's bluff should be called, What does he mean? He doesn't mean anything. He has been cribbing from the teacher who in turn may have been cribbing from the critics. You say that the colleges will not accept our graduates. Yes, but they will. If a boy can pass an examination at 80 per

cent. on spelling, grammar, reading, speaking, and composition I believe that he will not be rejected in English by any college. I regret that I can not express so strong a hope for the girls. They must probably continue to study the questions of previous examinations on the classics and figure out which ones will be due when they hope to enter.

May I repeat that our Rational Course in English should give our pupils a working ability to use the language for the practical purposes for which it is intended. It should increase their desire for reading by strengthening their love for good literature, a love which should have begun with the Mother Goose rhymes of their babyhood. May I also repeat that preparation for college entrance examination on the classics sickens the heart and makes the love grow cold. A pupil's love of literature is not a proper subject for college entrance examination any more than is his appreciation of art in any other form. The love of literature is a luxury, the heritage from a gifted teacher. A half hour's reading, gleaned from the byways of literature, by some inspired teacher "who enters into sympathy with the wayfarers of the spirit," will instill a greater love for the best in literature than all the classics. A love of art can no more be forced upon us by an examination than a scientific question can be settled by a resolution.

Prof. J. H. Humphries, principal of the Towanda High School, on the same topic, spoke in substance as follows:

The term "rational course" does not mean merely an "approved" list of textbooks or a stipulated number of "essays." It does mean a reasonable attitude toward the subject, maintained all the time in all departments of the school work. English must be more generally recognized as the most important subject, without which there can be no proper getting or giving of the thought. It must be recognized as the most practical branch in the course, of real bread-and-butter value. It is the duty of directors and principals to obtain competent teachers, specially prepared for this work. The principal or supervisor should follow up the class-room instruction in a business-like manner, and see that the pupils' language in the other class-rooms is what it should be—and the *Teacher's* also! All the teachers in the school should co-operate in holding up a high ideal, never accepting poor English in their classes. The work of one forty-minute period per day in this branch is easily undone in the other class-rooms unless there is co-operation on the part of all the teachers. In small schools the usual attitude toward English is that of allowing it to be last and least. All of the teachers do part of the work, but none are prepared specially for it. They often dislike the work, and make it a secondary consideration, and worst of all implant their dislike in the minds of their pupils. But even in high schools of the second or third class, and in township high schools, the well prepared English teacher will usually know enough Latin and mathematics to assist in teaching those studies with far less harm to the pupils than will result from the teaching of English by the specialist in mathematics who does not care for English.

Assuming a competent teacher, do not give too many periods to English. The work is hard. Ignore the college entrance requirements, for the good teacher will of necessity include some of the books required by the colleges, and if the *spirit* of the instruction is right the colleges will accept substitutes for their list. We need extensive, not intensive work. Too much intensive work, too much dissection, under the name of "literature" will result in disgusting the pupils. The teacher must be a good reader, and read much, and make the pupils read well. From the reading by the teacher the pupils get more good than from any other plan. The pupils like the books read in this way. They get to like poetry and go back and re-read for themselves things which they previously disliked. Right here is the key of any rational course, for the result of English teaching must be that the pupils shall like to read good books, and learn to know what good books are. I suggest a list containing a great variety of good books for home reading. The more of this done in the grades, the easier will be the work of the English teacher in the high school.

The work in composition should be oral and written. It should begin in the first or second grade. Talking in connected sentences should be encouraged, the mere answering in monosyllables of information questions being of little value. Written work should be frequent, and done in school. Let the teacher spare the blue pencil. Keep the written work in a portfolio. Let the topics be common things of immediate interest to the pupils. Let the recitations in mathematics, history, science, nature study, manual training be made lessons in lucid expression. What is wanted is the ability to do definite things.

The State Department course is sensible and practical in content and more so in suggestion. The aim through the course is first to bring about a fairly clear and coherent expression of thought; second, to contribute a little content; and third, to create enjoyment of English masterpieces. However, it is feared that detailed study must lead to disgust. Detail must be sacrificed every time. We want our pupils to like English not because it is easy but because it is great and enjoyable and beautiful and a delight. If they love to read good books the rest will come with years.

Prof. Hobbs suggested that the careful teacher of English would make a collection

of the barbarities of speech in his own community and drill on them constantly.

Member: The problem of English courses for high schools has not been solved. A greater problem is the attitude of the other teachers regarding English. It is generally true that the other teachers in the school accept such work as practically nullifies the work of the English department. Until the other teachers are watchful of the English used in their class-rooms, little improvement will be made.

Prof. Lewis: The admirable presentation of the subject in the papers read left little to be desired in the statement of principles. Once we studied the lives of authors. That is not literature. Now we study the author's works, and try to call out from the boys and girls what is not in them. The main aims of the work in English are power of expression and appreciation of the best in literature. Boys and girls do not get a real appreciation of literature from the study of Burke and Milton. What is the trouble? It lies largely with the college. But there is a ray of hope in the fact that last spring a conference of Harvard professors was favorable to doing away with lists of books to be studied, and requiring students to be able to use the English language.

We talk about the evils of lists of works to be studied, and college domination of secondary schools, and yet we keep on following the same old plan. Why? Possibly because it is hard to break away from habit. If we high school people would say what we are going to do, the colleges would adapt themselves to it. These lists of books are made out by people who know the subject but do not know boys and girls. When we who know the boys and girls say what ought to be done, the colleges will come our way—except, perhaps the ladies' colleges. Why don't we do it? Because the son or daughter of the judge won't be able to get into Smith or Wellesley or Harvard. But when the American Public School System says, "Do what our boys and girls need, and teach what ought to be taught," a great light will break over the whole situation. We agree on this point, only—we are afraid to act. Dozens of school journals for five or six years have taken the view of the first paper. But we still stick to Burke and Comus, knowing that these are not fitted to persons of the age of high school boys and girls. If we gave them literature that is life, and read to them and had them read to us, and act it and sing it, it would be a "savor of life unto life." Shakespeare and Milton can readily be made a bore, if the exegesis is dwelt upon instead of the life surging through them which appeals to boys and girls.

Supt. Pease: One thing should not escape our attention. If we dismiss the classics we must have an organized plan to take their place. What shall we substitute?

Supt. Lewis: There has been too much attention paid to chronological development in our literature work. We want to choose what we need from the classics and the literature of our day. If necessary, I would give Sherlock Holmes to a class rather than fail to interest them. I might take Macbeth next. It makes little difference who is the writer if he keeps close to the expression of life; but the literature of ideas and ideals is out of place. We must appeal to the dramatic instinct.

We have studied Scott—but how? In detail. About ten years ago I had about 150 of our seniors write articles commenting on the literature work in our course. I was amazed that they should all suggest dropping out Ivanhoe. On investigation, I found that the class, during the study of this story, was conducted like a history class. We changed the method, and read Ivanhoe as a story, devoting about three weeks to it. Some of the work was done outside the class-room. Now, all the seniors like Ivanhoe. The spirit of history is in the story and it does not matter whether or not Scott attributed facts of 100 years before to the period of his story.

Do not neglect current literature. Pupils do not like the books which are set down by the colleges for careful study. Neither are these books suited to the high school age. Think of asking high school pupils whether Milton is at his best in L'Allegro, Il Penseroso or Comus! They like Comus for its dramatic interest. Burke has some elements of strength for the best boys in the class. Those who enjoy original demonstrations in geometry enjoy Burke. No two teachers would select the same list. Each should select those books with which he can do his best work. The teacher's ability to read the book and to enjoy it, determines what should be used. Shakespeare, if the exegesis be omitted, may readily be used. Where the life that is in the play is emphasized, the pupils will love it, they will go home and spout Shakespeare. If they do you may be sure you are getting somewhere.

PROMOTION AND GRADUATION.

"A Rational Method of Determining and Recording the Advancement of Pupils for Promotion and Graduation" was the next subject upon the program. This much discussed and very practical question was taken up by Prof. J. G. E. Smedley, of Chester. He said that the subject assigned to him touched on dangerous ground, and he needed the sympathy of his audience. It is beyond human ability to suggest an

ideal system. The only suggestion he had to make—and it is not a new one—is that the system should be based on the credit or unit system, not on the "average" method. We should have a uniform method so that the colleges can accept our pupils on certificates—90 per cent. in one school should mean the same as 90 per cent. in another. This is almost impossible. There should be no mystery in the marking, grading and promotion. If we are compelled to mark pupils the parents should understand clearly how it is done. We cannot determine who shall be promoted and graduated without some system of records. I have tried several methods. Some teachers cannot mark and teach during the same recitation. If not, they should preserve in their memories what has been done each day; but it is impossible for this to extend over long periods of time. Pupils should stand on subjects and not on an average of subjects. Each pupil should pass in all of the subjects. It is wrong to let good work in one branch cover up poor work in another. "Conditions" in one subject might be allowed. Most pupils have a horror of summer work. I do not believe in holding special examinations to help them out. Let them take the weak branch the next school term. To some persons it may seem as though it makes no difference whether pupils are promoted by passing the subjects or on credits. But this is not the case. Instead of believing that the teacher is promoting him, the student should realize that he earns his own grade. Previous to our adoption of the credit system, we often heard students say, "The teachers would not promote me." Now, we hear, "I must get so many credits to graduate; what had I better do?" I do not believe conduct or industry should be marked. Certainly they should have nothing to do with promotion. If a student cannot behave passably well in school, let him get out. Graduation should depend on subjects mastered. Seventy-five per cent. seems to be a reasonable average for graduation. Any pupil ought to make that much. There should be examinations three times yearly, but most stress should be laid on daily work. It might be well to send out reports three times yearly. Monthly reports are not desirable. Sometimes a studious child does poorly during his first month in a new school. Unwise parents may thrash him for so doing—verbally or otherwise.

The question of graduation could be decided on the earning of a sufficient number of credits. I believe when we do away with our foolish frills at Commencement, we can hope for more attention to the work in school and less pressure on the poor pupils. Pupils should not be graduated according to standing in class. All should rank alike at promotion and graduation. If we do away with excessive ceremonies at Commencement, and with ranking, we will get out of our promotion and graduation troubles. I believe in promotion by subjects. Let the student stick to a subject until he has mastered it. Do not let him graduate otherwise. I have heard of graduation by the courtesy of the faculty. I do not know what this means. "Courtesy" is not the proper word. We cannot teach everybody, but we can teach most of our students. We should put our attention on the pupil and the subject and forget the marks. Prof. Davis spoke of the necessity of a uniform system. I hope some one will suggest how to carry it out. Such a thing seems almost impossible. It seems unfair that a college or university should set up a standard of marks, as the result would be that the pupils of a severe school would suffer, while the pupils of a lenient school would go in with flying colors.

RATIONAL METHODS TO DETERMINE SCHOOL STANDING.

This subject was continued in a paper by Prof. William C. Sampson, of the Bethlehem high school, as follows:

A rational method of determining and recording the advancement of pupils for promotion and graduation depends upon the pupil's ability to attack, analyze and interpret the subject matter and upon the completion of the work or course. Promotion may mean passing from one teacher to another, from one book to another, from one class to another and upon the quantity of the work done. Graduation may mean the completion of a certain course of study, and, in a deeper sense, the passing from pupil to student. The making of a man who is capable of meeting the problems of life, to analyze and interpret them. This is the real function of the high school.

In discussing a rational method of determining the advancement of pupils many points must be considered, as grades and marks, tests, lack of uniformity, advancement with conditions, and the completion of the work of the class, together with the ability to correlate and apply facts to the principles of every-day life as a test for graduation.

Grades and marks are indispensable factors in ascertaining a pupil's fitness for promotion. A value is placed on the quality and quantity of work done by the pupil. The teacher expresses, either numerically or by letters, the estimate of the pupil's work in each branch and in this way is able to determine the standing of the pupil. The difficulty is in the abuse and not in the use, for the teacher is prone to let the quality of the recitation escape in the quest for quantity.

A certain grade is set as a passing mark which the pupil must attain to be promoted. Passing may be made too important. If pass-

ing is an end it defeats its own purpose for it should be an incentive only when an incentive is needed. The desire to pass or the fear of retardation may be an instinctive desire to be with his classmates or an instinct of emulation. This makes promotion an end and never the incentive to study.

The ability of a pupil to grasp a present situation, to wrestle with a problem as he should, his capacity for future problems must be considered in the marking. Of course there must be a proper amount of work covered in each branch, but the amount should not be the all-important point. A pupil may not be able to solve all the problems of arithmetic arithmetically, but if he is permitted to pursue his work in mathematics he may be able to solve the most difficult problems in this study by the aid of algebra or geometry.

In some school systems the promotion of pupils is not determined by marks but by the teacher's knowledge of the ability of the child. In doubtful cases, and those in which the teacher is unable to decide, the matter is referred to the Principal or superintendent for examination. It requires, however, the keenest discrimination at some times to discern the slumbering mental powers of some apparently slow pupil.

Tests and examinations are very valuable aids in determining the advancement of pupils. Many persons would have us believe that these devices should be abolished, that they are a constant dread, that we do not have them in real life. Here, again, the difficulty lies in the abuse and not in the use.

An examination should not be used merely to test the memory for facts, but rather to organize and apply them. Examinations possess certain virtues which counteract their deficiencies as tests for knowledge and efficiency in teaching. Every examination should "give the facts and principles to be mastered a certain importance in the eyes of the pupil that might otherwise be lacking. They furnish a motive for the compact organization and close correlation of facts and principles." Without these unifying elements instruction is prone to scatter and be incoherent.

Every test should be constructed to supply the above tests. There should be general questions to give the pupil an opportunity to test his ability in organizing and correlating facts. Specific questions to test his ability to apply facts to principles.

A test of this nature may be looked upon as a pleasure rather than a bugbear. It possesses the element of a problem for a problem's sake. An examination of this sort may eliminate the dread which often accompanies it. Dread may be objectionable to pupils of a certain age, but to most pupils in the high school the serious effect is slight. The usual problems in life are encountered with a dread which is proportional to the problem. "If knowledge is to be applicable to the needs of life it must be presented and attended in a manner which will bring out its practical and social values.

There seems to be a lack of uniformity throughout the country with reference to promotion. School men seem to be of the opinion that there is no single method fitted for all school systems.

The method in St. Louis is to promote pupils at frequent intervals. This does not mean the usual segregation of bright pupils and dull ones but an individual promotion which permits pupils who are advanced to hold the lowest place in the advanced class and those who have been retained will hold the highest, at least until the incoming pupils have caught up to them. In this way part of the depressing effect of not being promoted is avoided.

The Cambridge double-track plan is that of dividing the class into sections, each of which may complete the course in specified times, four and six years. One section advances more rapidly than the other. A common point in the center permits some of the slower ones, who have proven themselves capable, to advance from this point with the more rapid section and complete their course in five years, or, those who have fallen back in the work of the rapid section may enter the slower section and in this way may complete the course in five years.

In Seattle the plan is to promote at half year intervals. The standard of work is judged purely on the quality rather than on the quantity of the work done.

All of these plans are admirable and place the responsibility with the teacher who must have a thorough knowledge of the pupil's individuality, his growing capacity, his power of attack and his application.

In many high schools there is the usual plan of promotion with conditions. There is a minimum general average and a minimum grade for each branch. This course permits great latitude. A pupil may be weak in a certain branch. Should he fall below the mark set for this branch he is conditioned, provided his general average is not below the minimum and he is permitted to make up this condition during the vacation period by passing a test at the opening of the term, or he may pursue the work of this study another year. If he cannot pass this re-examination he may then be allowed to take the work of the advanced class but should be classified with the lower class until the requirements of his condition are fully met.

One method for determining graduation is to credit each branch with a certain number of units. This deals with the quantity of work accomplished by the pupil. The real test not only deals with the quantity and completion of the work but also with the ability of the pupil to analyze and interpret. Does the pupil, at the end of his course, have an appreciation of the problems of life? Has he the power to attack these problems analytically as a student? Has he passed from pupil to student? If he has completed the course and can answer these questions affirmatively, he is then fit for graduation.

It is needless to say that the greatest care must be taken in the accurate marking and recording of the work of pupils. Complicated schemes should be avoided. It is an easy mater to jot down at the close of a recitation or the day an estimate of the work done by each pupil. These marks should be

averaged at stated intervals and the parent made acquainted with the child's progress. These reports avoid many difficulties at the close of the term.

Letters may be better than a per cent. basis for the purpose of notifying parents. They permit a latitude in the promotion of a pupil of whom the teacher may have positive knowledge that he is able to perform the work required in the advanced class.

In Bethlehem we have a simple system of recording the work of each pupil. The grades of each pupil are kept monthly by the teachers in each branch. These grades are averaged at the close of the term for a term average. Two general examinations are held. These marks are also averaged. A general average is then struck between the term average and the examination average for a final average. All these marks are recorded on cards together with the record of conduct, days absent, times tardy, the pupil's age, place of birth, the name and address of parent or guardian, and the previous schools attended.

All conditions are marked with red ink and also the record of any re-examination. These cards are filed by classes in case the pupil pursues his course to graduation and alphabetically if he withdraws before graduation. In this way we have a complete record of each pupil which proves to be a very valuable reference to a pupil desiring a position in which records are sought or on entrance to college.

The system in vogue at the Naval Academy at Annapolis makes it possible for a cadet to note, each week, his standing. A merit roll is posted showing the marks of each cadet in each branch. A numerical co-efficient is assigned to each branch and the cadet's grade on a basis of 4.0 is multiplied by the co-efficient of that subject. The co-efficient of fourth year English is five (5) and if the cadet's maximum mark is four (4) in that branch he is given the highest credit of twenty (20).

The maximum credits are seventy six (76) for the fourth year, one hundred and fifty two (152) for the third, two hundred and twenty-eight (228) for the second, and three hundred and four (304) for the first. A final merit roll is made up for his four years' training and those who have a merit of no less than eighty-five per cent. are "Passed with Distinction," seventy-four to eighty-four per cent. "Passed with Credit," sixty-two and one-half to seventy-four per cent. "Passed." This plan is rather elaborate and hardly suitable for high school records.

In conclusion let me summarize: Grades and marks are indispensable; tests are valuable factors in determining a pupil's ability to organize and apply facts to principles; Conditions are not objectionable when the requirements are fully met.

The test for promotion depends upon the completion of the work and the pupils's power to attack and analyze the work of the advanced class and the power of correlating and applying facts to principles in the realities of life should be the test for graduation.

Question: What is the objection to having some pupils graduate "with distinction."

Prof. Smedley: Because this sometimes results in injustice to students. I know of a pupil who was doing "distinguished" work. The pupil went to another school, where the methods were different, and his grade immediately fell. What justice would there be in graduating him with a second grade diploma because he could not do his work according to the new teacher's methods?

Prof. Hobbes: We know that pupils vary in their ability to do school work. I do not see how we can employ a rigid system without injustice to the slow pupil.

Prof. Smedley: The answer may seem heartless but it is this: If the pupil cannot do the work, do not let him graduate. He had better be employed in the industrial world where his peculiar talents will become manifest.

Member: There is another answer to Prof. Hobbes' question. We know that some boys are excellent bluffers. We *may* have students who are unable to get along, but I have not yet found them. If you demand that a boy shall come up to a given standard, he will do so. The nearest approach to failure that I know of was a girl who made 74 per cent. in German. On inquiry I found that in the examination she had answered correctly all the questions she had attempted. If she had had more time she might have made 100 per cent. I would not graduate pupils who did not do the work, but I would give slow pupils time enough to do it.

Prof. Hobbes: Is it possible to devise a system whereby slow but faithful pupils should get an honor which often seems their due, without at the same time allowing the bright pupils to do their best?

Member: I represent one of the smaller high schools. At graduation we give a diploma to all; but we give a certificate also, upon which we record the subjects pursued, the time spent on each, the number of recitations per week, the length of the period, and the grade on the per cent. basis. This plan is necessary to us, as we are located near the New York line and our pupils attend New York colleges where such a detailed record is required, under oath. I believe it to be an excellent thing. It is not an original idea, but it seems to be the best solution to the problem.

Prof. Yingst: It is important to have a daily class record. In geometry, if one pupil knew a theorem at the beginning of the recitation and another learned it in the class-room, would you mark the first 100 per cent. and the other 0?

Answer: I should mark according to my best judgment.

Prof. Geist: We are still thinking about college preparation. We ought rather to consider the best interests of the child. At

our school we have a number of boys and girls who make nearly the minimum number of merits necessary for promotion. Not every student can master mathematics. There are girls who simply cannot get algebra. We do not compel them to pass in algebra. If they get 80 merits they graduate. But they could not go to college on that system. The high school is not a college preparatory school. Its purpose is to prepare its students for social efficiency. With this object in mind, I believe that the merit system is the ideal system. We cannot mark by per cents. solely. The teacher must use his judgment. Teachers sometimes mark 100 per cent.—which is bad judgment.

Question: Does graduation depend alone on the number of merits made? Suppose the school has a four-years course—could a pupil graduate if he made the required number of points in three years?

Prof. Geist: Yes. We have twenty or thirty pupils who will do that this year.

COMMITTEES APPOINTED.

President Davis announced the following committees:

Resolutions.—G. D. Robb, Altoona, John F. Bower, McKeesport, W. W. Wright, Uniontown, J. D. Geist, Hazleton, and J. C. Baker, Philadelphia.

Nominations.—Wm. L. Smith, Allegheny, P. M. Bullard, Williamsport, and J. B. Geissinger, Du Bois.

Auditing Committee.—J. P. Breidinger, Wilkes-Barre, M. A. Richards, South Bethlehem, and J. S. Hosterman, Montrose.

RATIONAL VOCATIONAL WORK IN SMALLER HIGH SCHOOLS

was the subject of the following paper by Prof. L. B. Nye, Assistant Principal of the Steelton High School.

The motto of this paper is, "Every child fitted for self-support and self-control, by practical and theoretical instruction that would be of use in his or her life work." This idea should steadily be forwarded by adding courses along vocational lines and by eliminating non-essentials and adding essentials. It will mean less stress on war and more on peace; less on the technicalities of government and more on civics in the broad sense of good citizenship; less haphazard and more systematic moral instruction; less theoretical and more practical mathematics; and, in certain courses, less academic and more vocational work. These are among the needs of the day and the smaller high schools must give ear no less than the larger.

Need of Vocational Work.—One of the most important periods in the lives of young people is that which lies between the time when they complete the grammar grade, and when they choose their future work. Here all high schools should assist these young people by meeting their requirements as far as possible. Those intending to enter college are provided for, but for many whose inclinations or destinies are towards business or industrial lines, suitable instruction is not provided. These even our smaller high schools must serve or see their own usefulness minimized. Educationally speaking, every child is entitled to the best the community can afford. One of the strongest reasons for vocational work is the fact that it stimulates and strengthens mental effort. It is a demonstrated fact that the boy who spends part of each day in handling tools intelligently, and the other part in study, becomes stronger intellectually than the boy who devotes all of his time to his books.

What Vocational Work Cannot Crowd Out.—No matter how pressing the need for vocational work it must never be permitted to crowd out the very characteristics all employers look for, viz., good morals, good health, ready perception, power of concentration, practical efficiency, skill in the use of English and of numbers. If these qualities are lacking employers complain bitterly about the schools. But it is more and more the opinion of thinking people that all of these characteristics can be developed just as much by well chosen vocational work as by Latin, geometry, ancient history, and the like, in which the interest is often not as intense and can scarcely be made so.

Amount of Time for Vocational Work.—It seems to me high school students should devote approximately one-fourth of their time to that part of the world's store of knowledge which will bring them earning power—knowledge to be used for that purpose if they need it and to give them a true independent spirit if they do not need it. They will be better men and women if they feel they have the power to earn their way, whether they need it or not. There is a moral question involved here. By elevating the spirit of one's vocation, we establish the strongest bond of well-regulated society, the surest basis of internal peace, the natural associate of good morals. Many of our boys are so full of physical vitality and have so little opportunity to apply it, that it has been necessary to add deportment, or a system of demerits, to show the home the moral status of the boy, and to convince him that something is the matter with himself. Let us give that boy more of a natural outlet for his abundant life. George Carman, of the Lewis Institute, says of their co-operation of school and shop, "We are agreed that the boys are more manly."

What Other Smaller High Schools Are Doing.—In order to find out what other smaller high schools are doing I sent a circular letter to eighteen of them and to a few larger ones, those of Johnstown, Bradford, Lebanon, Warren, Altoona, Ardmore, Akron, Ohio, Springfield, Mass., and others. Sixteen replied. The first question was, "Is there a strong sentiment in your city for commercial work, for manual training, for domestic science, for any other particular kind of vocational work?" All answered "yes" for commercial work. For manual training and domestic science, each, twelve out of the sixteen said "yes"; two "no"; and two said, "Sentiment is growing." For any other vocational work, two "yes," eight "no," and no reply from six. Second question: "Irrespective of the industries of the community, what would you consider rational vocational work for the average

high school having an enrollment of a few hundred?" Here commercial work, domestic science and manual training are generally mentioned. Akron, Ohio, having a high school enrollment of about three hundred, and well in the forefront of vocational work, a city whose leading industries are rubber, cereal, clay and iron works, answers, "The usual course of work, joinery and cabinet-making, wood-turning and pattern-making, forging, chipping and filing, and machine practice, all accompanied by a strong course in mechanical and free-hand drawing and designing." Lebanon says, "Mechanical drawing, architectural drawing, bench work, wood-turning, pattern-making, domestic science, commercial work." Scranton, "For boys, wood work, metal work, drawing; for girls, domestic science, domestic art." Warren, "Commercial work, manual training including machine work, domestic science including cooking and sewing." These four indicate the general trend of the replies to this question. Third question: "To what extent should vocational work in smaller high schools prepare for the industries of the community?" Springfield replies: "In so far as possible it should look directly to the leading industries of the community." Akron, "The industries of most communities are so numerous that specific preparation seems difficult." Ardmore, "Should aim rather at fundamentals of manual work and at a knowledge of basic principles of commerce and industry than at equipping for some particular trade or vocation." McKeesport, "Not at all." Wilkinsburg, "Should send pupils to industrial plants on alternate days." Exceedingly varied are the replies to this question. Fourth question: (a) "What vocational work do you offer?" About one-half of the sixteen report domestic science and about three-fourths manual training and commercial work. (b) "In how many and what years do you offer it?" Here the answers are quite varied, sewing being offered anywhere from the sixth grade up, cooking and bench work anywhere from the eighth grade up, commercial work generally in the upper years of the high school. (c) "What are the leading industries in your community?" Comparing the replies to this question with those to the question. "What vocational work do you offer?" I found that the work of seventy-five per cent. of them is rather closely related to the industries of those communities. Fifth question: (a) "Do you employ special teachers for all of this work or is part done by regular teachers?" Here the answer is almost without exception, "Special teachers." (b) "Have you any difficulty in securing skilled teachers?" Seven say "no," the others "yes," three saying, "Yes, much difficulty." Sixth question: "What per cent. of your pupils take any line of such work as you offer?" "What is the approximate cost of such line?" Here there is little data. Akron answers, "Every boy and girl in the first year of the high school. Elective after first year. Twenty per cent. in second, third and fourth years." Other answers range from sixteen to seventy-five per cent. One says, "All the boys"; another, "Practically all." The cost in Johnstown for manual training is $14.29 per pupil, for sewing $1.28.

Adapt not Adopt.—Very helpful and suggestive courses of study were received from Warren, Pa., Akron, Ohio, and Brookline, Mass. In this work we should not adopt but rather create and adapt to the varied needs of the particular communities, not being afraid to be unique. "What are the local needs?" should be a leading question to ask, remembering that a very large percentage, probably ninety per cent., of these young people remain in the community where they were educated.

Vocational Work in Steelton High School.—Mechanical and free-hand drawing are offered during each of the four years, four periods a week. The boys generally elect mechanical, the girls free-hand. In the first and second years all take either free-hand or mechanical. In the junior and senior years both are elective. First year work in mechanical drawing consists of geometric problems, views of geometric models, geometric working drawings, revolution of solids, section views. Second year, intersections, wood joinery, machine details. Junior year, details and assembly of work bench. Senior year, details of five inch by eight and a half inch steam engine, a small steam engine being furnished for this purpose. This work bears a very close relation to the leading industry of Steelton, aiding the boys in reading blue prints, making drawings of parts of machinery, etc. Many of the boys secure vacation employment in this line of work. For a number of years the teachers of this department have been closely identified with the corresponding department of the Pennsylvania Steel Company.

The free-hand drawing which has a practical trend includes the following: Design and development of stencil and wood block as applied on curtains, pillows, bound books and articles of dress. Design in its application to leather; construction, including bood-binding; color-harmony as applied to dress and design. Both mechanical and free-hand drawing are taught by special teachers.

In science considerable stress is laid on those phases that have a direct bearing on local industries, such as the elasticity of steel under stress; water pressure and construction of water lines; the steam engine, form, construction, operation, efficiency; the gas engine with special reference to the automobile; commercial electric wiring, heating and lighting; the processes of iron and steel including determination of impurities; gas manufacture; purification of water, and chemistry of food.

In the commercial course bookkeeping, commercial arithmetic, stenography and typewriting are taught by a special teacher. The course extends over the junior and senior years. In the junior year five periods a week all year are given to each of the subjects history, English, stenography and typewriting, and a double period each day all year to bookkeeping and commercial arithmetic. This is a total of twenty periods a week all year to commercial work. In the senior year the same time is given to the same subjects. From twenty-five to thirty-three per cent. of these classes take this work. Those who take this commercial course have had in their first two years of high school work English, algebra, Latin, drawing, geometry, physical geography,

arithmetic and botany. Such a course should be equal in strength to any other in the same school. No opportunity should here be given to follow the line of least resistance. This is all the Steelton High School does along this line at present.

Domestic Science.—One trouble with the domestic science proposition is that we do not yet know fully what we want our girls to know. One school teaches sewing, another cooking, another both, and many another neither nor anything especially along the line of the household.

Meanwhile, as Dr. Draper says, "The manner of family living has greatly changed, and girls in vast numbers, who are no longer trained in the household arts, are becoming generally inefficient, or seeking public employment at low wages and excluding boys therefrom." Nowhere should equality of opportunity receive stronger emphasis than in the public high school. Too much specialization or favor towards any class of persons, especially towards a considerable fraction of the community, is dangerously unfair. Yet this is largely the condition, when usually a clear majority, the girls, are discriminated against. Comparatively speaking, the girls are most woefully sinned against in our high schools which do not teach any household science. The text-books in physics and chemistry, two subjects which should be and could be the most useful to girls, are written from the standpoint of the boy who is going to the technical college or university to study civil or mechanical engineering and the like, and the result is that the girls are entirely avoiding the science department or not getting therein what best fits them for their future work. The large majority are going to have something to do some day with household chemistry, household bacteriology, household management and accounts, and should be scientifically trained therefor.

Instead of teaching the girl the chemistry and physics which fit the boy for the technical institution it seems to me she should know more particularly the chemistry and physics of the household including the following: Air, its composition, ventilation; water, chemical composition, impurities, filtration; fire and fuels, chemistry of a match, thermal unit, comparison of fuels, fuel waste; chemistry of bread-making, of dust, soap, grease, acids, alkalies, salts, metals; chemistry of the laundry, of textiles, washing colored clothes; bleaching with sulphur dioxide, chloride of lime, etc.; removal of stains, paints ink, rust; chemistry of baking powder, cooking soda, cream of tartar, alum; relative cost of light, carbon, tantalum and tungsten burners; wall paper and reflection, white reflecting fifty per cent., dark green fifteen, etc.

She needs a knowledge of household bacteriology: Of dust, dead and living ingredients; bacteria, size, reproduction, relation to housewife; friendly micro-organisms, as in cheese ripening, butter-making, vinegar, and as scavengers; unfriendly micro-organisms, as in sour milk, potato rot, fermentation of food; disease germs, number, origin, methods of work, avenues of attack; diseases, kinds, means of infection, as water, milk, insects, dust; methods of protection, the body's resistance to disease, the leucocyte, toxines, antitoxines, immunity; safe guards, antiseptics, disinfectants, sterilization, pasteurization, cleanliness in home, sunlight, fresh air.

Wherever the finances of the district permit both cooking and sewing ought to be in the curriculum under a special teacher. Where the finances do not permit a special teacher, considerable can be done in household chemistry and household bacteriology by the regular science teacher if the laboratory is fairly well equipped. It is true that the high school should not attempt to teach everything any child may need in the future; it is true that the care of the sick and the conversion of sinners and similar problems are largely for some one else to solve, but it is equally true that all our high schools should aid in the solution of such problems.

Agriculture.—Prof. Mairs, of State College, suggests that a three or four year course should begin in agriculture in the middle of the second year, preceding it by one-half year of physical geography and one year of botany. The student would then drop botany in the middle of the second year and take up agriculture beginning with the plant, studying germination, propagation, plant production, nutrition and heredity. Next the soil, including tillage, drainage, fertilizers, aeration, conservation of moisture. Then the breeding and feeding of animals, and, later, dairying, farm accounts, rural economics, farm management, planting of home and school grounds, field and garden crops, the orchard and vineyard, etc. At least five periods for one year—three periods of recitation and two double periods of laboratory, field and demonstration work—are necessary. The advantage of beginning in the middle of the year, Prof. Mairs thinks, is to end with a growing season before the students complete the subject. Then they can be directed and encouraged to work out many problems for themselves during the summer vacation. Agriculutre is based upan many sciences and therefore should follow rather than precede them, particularly physical geography, botany and chemistry. If the school cannot teach chemistry certain omissions must unfortunately be made.

The bulletins of State College, of the University of Minnesota, and of the U. S. Government on Agriculture; the reports of the State Inspector of High Schools of Minnesota, and the Manual for Borough and Township High Schools of Pennsylvania are very helpful, suggesting the best text-books, reference books, magazine articles, apparatus, material, outlines, courses of study, etc. A matter of first importance is the securing of land adjacent to the school house. Minnesota appropriates nearly $25,000 annually to her ten agricultural high schools each of which has from seven to twenty-two acres of land.

Relation of Rural School to Borough and Township High School.—The rural school because of natural limitations can never give sufficient vocational instruction, but its rather close association with borough and township high schools can aid very much if those high schools are vocationalized. Here is an opportunity for the borough and the rural district

for several miles around the borough to work together for mutual good. The interests of both are largely the same. The rural school could articulate closely with either of these high schools, following a regular course of study, doing less in certain lines than now, and graduating into the high school.

Manual Training.—As early as 1889 a report from the Albany High School said, "We believe that manual training is legitimate educational work in our schools; that the tendency is to keep boys longer in school; that its effect is to round out the development of the pupil; that it promotes good order and discipline; that it has a moral force, and that it dignifies manual labor by removing false notions of degradations." Its rapid growth since speaks for itself. A three-year course of study should contain, at least, the following: Mathematics through trigonometry; in science physical geography, physics, chemistry; English, history and civics; free-hand and mechanical drawing, including designing; in shop work proper care and use of tools; joinery and cabinet making; wood turning and pattern making; forging, chipping and filing; machine practice, or as much of these as possible, the drawing accompanying the shop-work, and, together with the composition, being very closely related to it.

Why do I suggest wood and metal work? Because wood and metal represent our two leading groups of industries, and because we cannot prepare for all industries. What shall be done with the output? I am surprised to hear that some of our leading technical, manual training, industrial, or mechanic arts schools, are putting all of it on the scrap pile. What sort of ideal does this inspire? No wonder we are an extravagant nation. Why should not the beginners do the rougher work, and the more experienced the more technical, and articles made which are of use in the school, the home, and on the farm? If that method of disposal is not adequate, and the work is done well, why not let part of this output find its way to market to the profit both of the school and the individual worker? We hear the objection, "It will be detrimental to producers outside of school." True, we should not inflict undue hardship on present producers but careful adjustment will prevent that, and then too the larger social need must always control.

Minnesota and Vocational Work in Smaller High Schools.—I had heard it said that Minnesota has the best high school system in the United States. Therefore I tried to get practical information on this subject of vocational work from State Inspector of High Schools, George Aiton, and from principals. Minnesota has two hundred State High Schools having an enrollment of less than five hundred. One hundred and thirty-six of these teach manual training; one hundred and one, cooking and sewing. This indicates how general vocational work is in Minnesota. The number of students taking cooking last year was double the number the year before. Almost the same is true of sewing, and thirty-eight more high schools taught manual training last year than year before. Thirteen hundred and thirty-one students took agriculture last year. The average expenditure for outfit per pupil was chemistry three dollars, physics three, cooking and sewing six, manual training ten.

Prof. Aiton says, "Most of our schools are too small to employ specialists." Other excellent and very vital remarks from his report are the following: "Among the articles of everyday utility made in various school shops were ladders, wood-boxes, tool-chests, book-shelves, chairs, kitchen tables . . . farm double trees." "Parents are enthusiastic over practical shop work, and communities will go to any length to provide facilities for turning out work of a useful nature." "A common sense combination of academic and industrial work, the latter to include domestic science and agriculture, is the type of school that makes a hit with the public, and is the school that will do the most good." "It would be a good plan and quite possible to settle the question of graduation attire by allowing each graduate to make her own garments under direction of an instructor," and "I was pleased to note at Cokato that the girls forbade the janitor to scrub the floor of the kitchen."

Change in High School Course.—High school courses are changing. While the standard subjects are holding their own mechanical drawing, manual training, commercial subjects, domestic training, and agriculture are making marked gains. But this change is conservative and constructive. There is no need for alarm. No doubt during the next five years the change will be still more rapid.

High School Teachers and the College.—We have been saying we will not elect anyone as a high school teacher unless that one is a college graduate. That ideal is all right if the ideal of the college is all right. The college should be the leader of thought in all directions, but in the field of education it has been outdistanced, partly at least, by the people. The tax payers for a long time have been asking for practically trained teachers. The college replied, "There is no discipline and no culture in manual training, domestic science, agriculture, and commercial work," and to-day it cannot supply the demand for practical instructors. It now looks very much as if, for some time to come, a considerable number of our teachers for high schools would not be college graduates but would have to come from graduates of special trade and technical schools, commercial schools, and from intelligent, skilled artisans.

Practical High School Teachers and Graduates.—It is necessary for the teacher who desires employment in our "Smaller High Schools" to broaden out and make preparation in one or more of the practical subjects, as well as in some of the old-line work. Specialists are scarce but still more plentiful than the practical teacher, the combination instructor who can teach language, science, history or mathematics and some practical subject, as the rudiments of agriculture, shop-work, cooking, sewing, music, or commerciai work. Latin, and cooking would to-day be a better combination than Latin and Greek were yesterday. Science and agriculture, history and sewing, mathematics and manual training, are likely to be the combinations of tomorrow. Some place or places should be found among our

educational institutions where such teachers could be trained. A certain number of high school combination instructors ought to be prepared annually. We need, as such instructors and graduates, young men of reading, of breadth, of culture, who can dignify labor; and young women who are not only literary, but who, out of a knowedge of having done it themselves, can say to the cook and the seamstress, "Do it thus," and who as teachers can inspire our daughters with that noble ideal that there is no more ladylike occupation than that of making a home.

Prof. Nye was followed by Prof. Geo. A. Mincemoyer, principal of the Renovo High School, in a paper on the same general subject:

RATIONAL VOCATIONAL WORK IN SMALLER HIGH SCHOOLS.

The writer of this paper is greatly indebted to the leading exponents of this important question for extracts and suggestions gathered from their books and reports. In fact, we assume little creadit, if there be any, except for careful study of the same and the actual work necessary in preparing this rather meager treatise upon a very rich and vital topic.

Dr. Snedden says that the education whose controlling motive in the choice of means and methods is to prepare for productive efficiency is vocational; Prof. Hanus, that education is the preparation for the participation in and the appreciation of life's activities. These men also confirm the opinion that vocatonal education stands justified from an educational point of view only as it adds to the welfare of society through increased efficiency of the individual, and that in spite of the demands for the practical, the people need more of liberal education. Upon these premises our viewpoint is based and how we, in the smaller high school, with limited facilities under quite adverse conditions, will be able to meet these demands certainly is a problem. Possibly a step in that direction is elimination and correlation.

Professional education is reasonably well provided for now by the courses of study used in these schools. The graduates are able to enter institutions for specific training along almost all lines, and possibly arrangements can be made with these institutions whereby they may continue to do this even if certain eliminations were made to provide for some additions to meet local demands, commercially, industrially, and so on.

Assuming in the above and the following discussions, that it is doubtful whether the public schools can make more than mere artisans along any line, it seems to me ample provision is also being made for the commercial side, or easily can be, in the regular English course, supplemented by occasional reviews in arithmetic with stress upon rapid and accurate drills in the fundamental operations, fractions, interest and discount, business terms, commercial papers, and an abundance of commercial transactions touching upon the industrial pursuits of the community with possibly a course in book-keeping, stenography and typewriting where conditions and facilities permit.

The present course in science offers a broad field for the correlation of agricultural work. A knowledge of specific gravity is necessary for soil classification. Tillage of the soil may best be demonstrated by capillary tubes in the laboratory. Drainage and erosion involve hydraulics, and the cause and effect of weather phenomena are best understood after studying the law of gaseous bodies. Chemistry is the basis of soil fertility, and, together with soil physics, determines largely the production of crops. With animal physiology it determines animal production. Physical laws of the indestructibility of matter and of correlation of energy are necessary that fertilizers and animal rations may be put on a safe basis; and the calorie has no meaning in this connection unless learned as a physical unit. Correct cultivation, pruning and propagation are dependent upon a knowledge of botany, while climate, soil, plants, crops, farm animals and productiveness in general are a series of causes and effects that depend primarily upon physiography. Many other examples have been suggested, so that it seems the agricultural communities have great opportunities even under present conditions.

Along industrial lines, it seems to me, there is a marked contrast. My only tangible thought is the part-time school, in which the boys and girls shall give a part of their time to actual work in the shop or factory under the direction of skilled mechanics, and the remaining and larger part of the time in the schools where the theoretic work in mathematics, science, and so on, may be arranged to more intimately connect with the practical work of the shop. This, of course, requires the co-operation of the management of these industries. Such a plan surely is reasonable if not feasible, for these industries are private enterprises and therefore responsible for the efficiency of their work, and their cry of high prices due to inefficient and unskilled labor is unwarranted. However, since these schools are not common, possibly we might improve conditions somewhat by arranging a larger part of our work in mathematics, science, English, geography, history and drawing to pertain more directly to the industrial demands of the community. The other manual arts might also receive some special attention, according to demands and conditions.

Domestic Science will merely receive mention in this paper since my colleague has given the question special study and has very ably presented his findings. It occurred to me, however, that correlation of this work with the sciences, mathematics and drawing can also be quite satisfactorily effected.

In conclusion, our personal opinion, somewhat confirmed by our study, is, that the present tendency toward commercialism is too great; that the emphasis put upon the so-called bread-winning occupations may ultimately deprive our boys and girls of opportunities in the genuine appreciation of life's activities in the broadest sense of the term; that too much stress is put upon the immediate rather than the ultimate earning power; that with the comparatively small period of the lifetime of the

pupils devoted to actual school work, he might profitably devote the whole of this time to more liberal education and thus broaden rather than narrow his view of what life really is. Perhaps there are too many machines now, and too few broad-minded men who are reasonably conversant with the true conditions of life, and able to cope effectively with the genuinely vital problems of the day along moral, social and political lines. The future of the state and nation will not be safe in the hands of men who can not think outside of their own particular vocation. We believe further that a well-grounded cultural education correlated with the study of practice and theory intimately connected with the general industries of the community, emphasizing principles of right along moral and civic lines, and respect for the rights and privileges of others—a square deal to all—is a good foundation for all vocational work; and that the mental development which must result therefrom together with the training of the hand acquired through the various manipulations in the drawing room and laboratories are about all the smaller high school can reasonably do for the general good of the masses; and, further, that the skill needed for efficient apprenticeship must, to a large extent, be supplied by the vocation itself or provided for in special schools instituted for that purpose.

Prof. J. P. Jackson, Dean of the School of Engineering, State College, was the last speaker on this topic. He said: The colleges cannot tell you what you must teach. Only one-tenth of your pupils ever enter a college. The high school teachers must tell the colleges what it is feasible to do. I hope the high schools will fix college entrance requirements and not recommend a college to their students unless it accepts these standards. The most important growth which is coming up over the country is the co-operation of the schools with the industries. The high school which is taught by a man who can go out and meet the maker of clothes or of shoes and the farmer, and who can discuss with them what is needed, and persuade them to take the boys into the shops and upon the farm during the summer time, and whose high school is taught in such a manner as to prepare his pupils for real work after graduation—that teacher will have a model school. Such a school will fill its boys with enthusiasm for study. In Cincinnati the week by week plan—one week at school and the next week in the shop—is operated with some success. It is important to make our high schools useful. I came today to tell you of your duty to a class of persons reached so far by no one—people who are not in school and who are not educated enough to study at a library. No other organization can help them as you high school people can. The highest seat of learning in the city is the high school, which should be responsible for this part of the population. If a large body of boys in many industries could attend special classes one-half day a week, on pay, it is your duty to give them the opportunity. Why is it not your duty—in lieu of that—to offer in your town classes for a vocational nature? Why must the Y. M. C. A. offer such evening courses? You are neglecting to offer educational facilities to these people. I want to make a plea for this mass of humanity, running up to hundreds of thousands, who cannot help themselves, in the small towns where high schools are not advanced educational institutions. I appeal to you to exert your utmost endeavors to make them more efficient workers and better citizens.

TUESDAY EVENING.

THE annual address, by Principal William McAndrew, of the Washington Irving high school in the city of New York, was upon "The High School Teacher as a Public Servant." It was delivered in the hall of the House of Representatives before a large audience. The hope was expressed by many that this address would be published. It is here given in full. Mr. McAndrew had no manuscript. Our version is from a stenographic report.

THE HIGH SCHOOL TEACHER AS A PUBLIC SERVANT.

Ladies and Gentlemen: On the way here, I was practicing putting up my hand every one and six-tenths seconds. I haven't got it exactly perfect yet, but I wanted to get objective illustration of one and six-tenths seconds, because that represents the period at which, while the high schools of the country are in session, a boy or girl reaches the age of fourteen in the United States—one in every one and six-tenths seconds, that is, thirty-eight a minute, that is 3250 an hour, that is 11,250 a day, that is in the United States, 1,840,000 boys and girls reaching the age of fourteen during the year.

Now, what has that to do with us? Why, that has all to do with us, because that is our business—boys and girls reaching the age of fourteen, and what are we to do with them? If we ask the ordinary citizen in our community what they expect us to do with boys and girls of fourteen years of age and upwards, he would answer, "We expect you to educate them." And what is it to educate them?

Now, if I were sitting down there where you are and you were standing up here where I am, and I heard you say, "What is education?" I would say, "There is another of those pedagogical preachers who is going to give us a dogmatic talk on what education is. Come on, let's go out and see the Merry Widow which is being performed this evening at the theatre down town." But I would be wrong. There is going to be no attempt

at a dogmatic argument as to what education is or ought to be, because dogmatism is the farthest thing in the world from my present state of mind.

I do not know why I am here. I do not know why I came to Pennsylvania, unless it is for the same reason that the heathen some times come to the missionary meeting, to get enlightenment, for I stand before you bewildered. I stand before you confessing that the whole high school situation of the country astounds me, "mixes" me, and what you will get out of this meeting is the satisfaction of going home and being satisfied with yourself, because you know so much more about the thing than I do.

For twenty-five or thirty years you have been hearing experts tell what education is. I remember at the meeting of the National Educational Association in Boston, the President of that Asscciation, Dr. Eliot, told us that "Education is the process that produces an educated man," and then he told us what an educated man is or ought to be. He analyzed him. He showed that an educated man is a man that has the powers of observation, a man that has a certain amount of knowledge, a man that can express himself, a man that can image things, a man that can enjoy nature, and a man that can use his hands; and the year before that the President of the National Educational Association told us that education is that which ought to produce a well-defined individualism, that is, education ought to produce a personal product. That was John Cook, and the year before that William R. Beardshear, the President of the Association, told the people assembled there that education ought to produce a personal product, and he told what that product ought to be as to head and heart and hand. And then the year after President Eliot, President Maxwell of the National Association, at a meeting at Asbury Park, told us that education ought to produce the efficient man—education should be for efficiency—it should produce a personal product. And then he analyzed this efficient man and showed how he should be a person with a healthy body, a person that has a certain amount of information, a person that is able to reason, a person that can enjoy nature, a person that can work with deft hands, a person that has the highest kind of character, and one who is desirous of co-operating and can co-operate with other persons.

Now, these four Presidents of our representative educational body have thus maintained in four successive years that the product of education ought to be a person, and they have analyzed this person and shown that education ought to be the selection of things that will produce the person. Is that a new idea to you? Was that idea invented by President Eliot, and were these other men his agents in claiming this to be the purpose of schools, or was that an inheritance that came down to these men from the past? To answer this question, one must search the educational scriptures. We go to the Ancient Greeks. We find Plato defining education, saying definitely that education is that which produces a man: that a man is one whose faculties are in harmonious arrangement with one another. After Plato came Aristotle, who said the same thing. He defined education as that which produces the wise man, and then he told what the wise man is as to his health, as to his reasoning powers, as to his various abilities of intellect and of character. Socrates said the same. I never could quite make out whether Socrates thought and said all these things, or whether Plato or Xenephon or the other writers used him as the stalking-horse for their own ideas. At any rate, Socrates said this same thing, so you see there are seven wise men—four presidents of the National Educational Association and three other philosophers who have told us what education is, and practically in the same terms.

I would like a name to characterize a man of this sort, that thinks out first what the product ought to be, and then suggests that we use certain means to reach the product. Now, what name can we apply to that? What they are doing evidently is comparing ideas. My psychology has told me that this sort of thing occurs in the front and upper portion of a man's head; and when a person begins to do very much of that sort of thing, he needs more room, and his attic roof rises, and you begin to recognize the marks in such a person of being able to do the things that these seven wise men have done. When the poet speaks of "high-browed men to lofty things ordained," you know what the poet means; and when a hurried generation like our own has shortened the expression "high-browed men" to "high-brow," you accept the term as designating a desirable thing, and you call it either a metonymy, a thing containing for the thing contained, or a synecdoche, a part for the whole—whichever way you look at it first—but you apply the term and you use "high-brow" as designating something very desirable, something which you admire, something which ofttimes you wish yourselves to be. Although the term "high-brow" is sometimes used in a disrespectful sense, that is no reason why we should reject it, because "school ma'am" was also for many centuries used as a term of reproach, and so has "educator" been used, and so has "pedagogue," and so in some benighted communities, has "school master" or "school teacher" been used as a term of reproach. But, if you will permit me, I will use the term "high-brow" as meaning a man that thinks what the process ought to produce, and suggests that educational exercises ought to be selected for the purpose of getting that product.

I would like to show that the idea that these four Presidents of the National Educational Association had, is an idea that is supported by a great many eminent authorities. So yesterday I took down from the dusty shelf the book that I used to help me get into our profession, and I looked up what these various eminent men had said about education, to try to find whether I could increase this company of "high-brows" by searching through history.

Now, I find, after all these doctrines had been originated by the Greeks and perfected,

that something happened to education, and it fell into a bad way; and the high-brows did not seem to have the influence over it for a good many hundred years that you would expect that they ought to have. In place of the "high-brows," I found hired men. What do I mean by a hired man? You get James. James comes to cut the grass, or to wash the windows, or to make the clothes, or to take the cows out to pasture; and he does it, and while he is doing it, he doesn't think of it in its broad relations. James does it to-day as he did it yesterday, and he gets his pay and forgets it. That is a hired man, and the "high-brows" have invented a term which they use to describe the style of work which the hired man does. They call it formalism. I find the authorities say that the Greek education fell into formalism, and deteriorated to such an extent that we had the Dark Ages —when nobody knew anything at all that was worth knowing—and finally came the Renaissance.

Fifteen hundred years after these doctrines of education had been promulgated, people began to awaken and to think about education and the first great thinker with regard to it in the Middle Ages was Rabelais, the originator of the new education. So far as I can find, his new education was exactly the same in principles and theory that Plato had announced before him. Rabelais, taking the hired men of his time to task because they were doing work in a formal manner, said, "All you are trying to do is to give information and that isn't education at all." Said Rabelais, "Education is that which produces a man—a man who thinks, who thinks accurately, who has command of all of his powers, who looks you squarely in the eye. Your old education is producing nothing but (what he called) ninnies and nimcompoops, but you know education is that which produces the gentleman and the scholar."

Montaigne coming right along at the same time, announces clearly and plainly, "Education is not to give information, but it is to produce the all-round man." And Luther—I surely claim Luther as a "high-brow" because Luther blamed the hired men educators of his time and said, "What you are doing is to limit the human mind by certain prescribed studies. You are fussing over Latin and over Greek. You are limiting the young and growing mind as you would put a pine tree into a vase, without giving him any chance to expand." So Luther belongs to our other "high-brows."

After Luther came Locke, and Locke as you remember, started his treatise on education by saying, "Education produces a sound mind in a sound body," and as he elaborated it further you will see that his system of education was to produce a personal product, an all-round man. Descartes announced very plainly that what education should do would be to produce and to unfold the human faculties and to bring a man to his perfections. And after Descartes, Rousseau certainly stated plainly that what education should do would be to find out what the wise man is and then bring the child to be such. And after Rousseau certainly comes Comenius, for Comenius it was who said, "Education is that which fits the man for the exercise of his powers in life." Education is a fitting for life, more than that, education is life itself. It takes the various features of life itself and puts them into such arrangement that they can best produce the all-round man.

After Comenius I think we ought to have Helvetius who said that every perfection of man can be secured by selecting the proper things to perfect him and the selection of those things is education. Then came along a group of those men immediately preceding the French Revolution that are of great importance to us—Rolland and Turgot—who said the purpose of education is to find out what a man should be and to make him. After them, Duclos whom we have almost forgotten, but who belongs very intimately to America; and then Mirabeau who said to the teachers, "Your business is not to give information; it is to develop the citizen."

These men who were active just at the time of the French Revolution and who made this new proposition that it is the business of the State to educate its children, all of them, to become intelligent, able citizens, are the men that we are especially interested in—because they are the fathers of our American educational theory. You know that Franklin was intimate with these men. Jefferson resided abroad. Adams and other Americans who founded our Government were thoroughly familiar and in accord with these ideas of the French Revolutionary writers on education, that the purpose of education is the development of a man's powers so that he, the ruler of himself, and when put into office the ruler of his fellows, must be able to exercise that rule to the greatest degree of perfection. The laws with regard to education in the early history of this country were inspired by speeches which quoted again and again this educational highbrowism, that the personal product of teaching is the thing that should be analyzed—and education should contribute towards that end.

If you will look back through the volumes of the National Educational Association, or if you will look back through the volumes of the Commissioners of Education, or through educational publications in this country, or speeches or articles or laws, you will find all the time this theory of education repeated again and again—this statement that education should aim at a personal product and the personal product should be the efficient man. You will find these speakers quoting from the various authorities that I have mentioned. They will quote from Pestallozzi a statement that the purpose of education is not the giving of information, but it must center on a child and must develop that youngster's powers so that he approaches more nearly to perfection. You will find them quoting Frœbel whose whole book was called "The Education of Man" and whose whole essay is to show that education must not be limited in the selection of things which he uses but must keep clearly in mind the purpose towards which it is tending, viz: the unfolding, as he understood it, of

human powers and their development to perfection.

They quote to us Herbart who says in his opposition to certain hard mannerisms of his time, "It is the many-sided interests of man that is the Main thing, and everything else that the school does is subsidiary to it." We ought, with Herbert Spencer, to ask: "What is the product that education should produce? What is the educated man? What are his powers? What are the things that will produce them, and how can these things be so regulated and managed by us that the results and the progress will follow? You will find as I did a week ago in hearing a High School principal deliver a speech on education, that they will quote and refer to that famous definition of Huxley as to what the educated man is—"I hold that man to be educated who has been so trained that his body is a ready and willing servant of his will, that performs with ease and with pleasure whatever the will requires it to do; whose intellect is a cold logic engine, ever ready like a machine to spin the finest gossamer or to weld the largest anchor of the mind; whose memory is stored with all the multitudinous truths of nature and the laws of her operations; who hates all vileness; who loves all beauty either in nature or in art; no stern ascetic, but full of life and fire, and yet whose passions come to heel at the command of an imperious will subject to a gentle conscience. A man who respects himself and others. Such a one and no other," he says, "I conceive to be liberally educated, because he is a complete man and he lives in harmony with nature."

Now, if my friend quotes this in the Twentieth Century as the type of the educated man as one harmonious development; and if Plato, five centuries before Christ, says that the purpose of education is to produce the man whose powers are harmoniously arranged one with another; then we have, do we not, twenty-five centuries of educational "highbrowism" from Plato down to all these speeches and essays we hear to-day.

That is the idea of the educational "high-brow." Let us come back to the hired man. When the hired man comes to wash the windows, he washes them with your mop and he washes them with your soap and gets the water from your pump; or if the hired man works in your office, he works with your books and with your materials at your desk, and in accordance with your methods; or if he works in your factory, he works with your machines. Whenever he ceases to use your tools and think your thoughts and begins to think a little for himself and to use his own tools, he ceases to be a hired man and he draws near being an artist or a high-brow.

When a High School man gets up to tell what he and his teachers do, and when he quotes all these various authorities, and when he says that his purpose and the purpose of his staff and the purpose of his school is to produce an all-round, well-developed man, he lies to himself and he lies to his audience, does he not? When he says that his Institution and his exercises are devised for that purpose, either he lies or he guesses. You take for instance the High School at Altoona, or Scranton, or Allentown or Wilkes-Barre, or take the High School in the town where I was brought up, which I attended, how did they get the exercises which constituted the daily business of the High School while I attended it? They got it from Grand Rapids. And where did Grand Rapids get it? Grand Rapids got it from Detroit. And where did Detroit get it? Detroit got it from Rochester. And where did Rochester get it? Rochester got it from Albany, and Albany got it from Boston, and Boston got it from above, like a stalactite, that came down from Harvard University; and Harvard University got the idea from England, and in England the idea of the College and the preparatory school which was the High School, was to give to the youngsters a certain amount of definite knowledge that would enable them to do the things that they did in their University.

When I look at the course of study in that school I attended day before yesterday—it is very little changed from what it was twenty-five years ago. When I compare that course of study with the course in Altoona, Scranton, Wilkes-Barre and Shamokin, they are all the same. Then how can the principal of the little town that I attended, and how can the principal of these four towns, or how can you in your towns, which have just the same sort of course of study as in Shamokin, how can you stand up and have the face to say that your Institution and teachers—your High School is devised and is carried on for the purpose of producing an efficient person containing the following described qualities of efficiency and then quote Plato or William H. Maxwell or any other of the educational high-brows? That is the puzzle. That is what has been bothering me from Philadelphia to Harrisburg. That is the reason why I ought not to be speaking here to-night.

The situation then brings us to the question, Why is it that the American theory of education is so clearly a case of high-browism, and the American practice of education is nothing but hired mannism? I think the Germans had something to do with it. Whenever you can't lay a thing on anybody in Pennsylvania, if you can't lay it on the "Pennsylvania Dutch," lay it onto the Germans. The reason why I think the Germans did it is this. The Germans had Kant, one of the most remarkable spirits of our time, who was a high-brow, and Kant insisted that the purpose of education was the production of a perfect man; but they also had Sturm who was the very King Devil of hired mannism. He had one of those German heads for the organization of systems, and he organized such a brilliant system that it was saddled upon Germany for two hundred years. It was Sturm who made the center of the German educational process, the course of study, and who produced the most magnificent system of piecework education that you could find the world over; who turned German schools into the "real" schools, gymnasia, etc., and intensified in that country the caste division of boys—separated those that were to work with their

hands from those who were to enter professions.

And the Germans did also another thing for education, which has been praised in America and other places, world without end. Germany developed the specialist. It was in Germany at the beginning of this century that they began their remarkable advancement of progress by making these microscopic analyses of the various divisions of knowledge. They invented different sciences; and pushed forward so that they made Chemistry almost a new science, as also physiology and botany and other sciences—a splendid thing for civilization. But unfortunately, instead of having a Rockefeller or Carnegie to take these researchers and to put them by themselves in an Institution where they could advance knowledge, these men went into the Universities and the young fellows that were associating with them were men that went out to teach. Having been schooled in that atmosphere these men went out into the German schools with the idea that the science of secondary education is to promote scholarship, is to promote research, advance knowledge. They lost sight entirely of the high-brow theory of Kant, and they got the German schools so tied up with this idea of centering on scholarship that, in 1890, the head of the whole Government had to call them together and say, "See here, what are you doing with the German youth? You have the idea that your school is to give scholarship, to increase learning, whereas you ought to be producing character in German citizens, and fitting the German boys to live the life of 1890."

It has always seemed to me that we, in our secondary education, somehow or other got that German disease. The reason why I think it so is because I to-day well remember that in my younger days the College professor went to Germany and studied, and then came back and taught the boys in college. When we got a teacher in our Academy he was fresh from College; he had the idea that the sun rose and set in the German methods; he was the one who thought that "God knows everything, but the Professor knows it better."

So they gave us this German idea in our schools. See what happened. We started our elementary schools right on this American idea that the school is for the youngsters and not for the promulgation of any particular line of knowledge. Our elementary schools were built up in that way, but our high schools were never built as they should have been on the substructure laid by the elementary schools. Our High Schools came down from up in the air somewhere, and a great many have remained up in the air ever since. Here we found this situation. The country became rich enough—so that they could undertake to give the public secondary education as we had been giving elementary education. This idea became quite prevalent throughout the country as we began to recover our prosperity after the Civil War. What did we do? Did we study the elementary schools to see what they had done and to perfect further what the elementary schools were perfecting—the ideal man? Not at all. We had models all around us, the academies—and the academies were pay schools, endowed schools, with no obligation to the general public. They could do as they pleased. Their main business was to fit for college.

Just as soon as the nation itself established secondary education, instead of thinking out the problem and instead of figuring on the American theory of education, which I have ventured to call "the high-brow theory," they imitated the academy. They took over these institutions. They used the same course of study and they have given us the situation that we have to-day. Now there you are and here I am. Are you a high-brow or are you a hired man? Are you a high-brow now and a hired man next Monday? Are you like me, a high-brow in Harrisburg, but a hired man back in New York? I don't know. Let us see. Let us examine what you do and what I do, and see what we really are. There are some of us who say we are both. It seems to me to be a difficult kind of business but it has been tried.

I recall an address by Louis Soldan, the principal of the High School in St. Louis, afterwards the superintendent of schools. He said, "The purpose of this High School is to produce true manhood and true womanhood," and a little later in the same address, he said, "The principal of this High School is to produce true manhood and true womanhood by means of conventional studies." That makes me think of a beautiful book in my wife's library at home. You take it and you read and see beautiful breakfasts, luncheons, dinners and suppers. You pick it up with the idea of finding something, and you find that the breakfasts, luncheons, dinners and suppers are all there, but every one of them has to use shredded wheat biscuit. And so when any one defines the purpose of his institution to produce true manhood and true womanhood by the conventional studies, I am wondering why it is limited by the conventional studies. The educational theory of America was to produce true manhood and womanhood and to select, as Frœbel told us, without limitation any of those exercises by which true manhood or true womanhood could be secured. But it looks as though what we were after is not just manhood or womanhood, but algebra manhood and Latin womanhood or geometry womanhood. As President Schurman says, "We are not paidocentric. We are not centering upon a boy, but our High School is bibliocentric, based on a book, or themocentric, with its center as a course of study.

Some of you sent me some very interesting documents when I asked for them. I have one of them here. This is the most important thing about the High School—suppose we call it the Belleville High School, because I do not think there is such a town as that in Pennsylvania. It might just as well be the High School which I attended every day, so don't let any sensitive Pennsylvanian take offense. We will call this the most important document issued by the Belleville High School. Is this paidocentric? this Belleville High School? I think not, because the first thing the attention is called to is the course

of study, and that is the most important thing a stranger would think about in the Belleville High School. Therefore, the Belleville High School is themocentric—with the course of study as its center.

If the Belleville man thinks he is a high-brow, and that he is aiming to produce manhood, he is aiming at it in a curious way; because the kind of manhood that Belleville aims to produce must either be classical manhood or Latin-scientific manhood or English-scientific manhood, or technical manhood or general manhood, for those are the headings I have here; and I notice the exercises that are to be inflicted upon the lad that is to be made into a man are divided into groups of four years each. Why is it, if a school is aiming to do the best it can for the children, if it is to help them to labor on towards the perfection of their manhood or womanhood,—why must it be done in four years instead of three, or instead of five or seven, unless the idea of the school is themocentric? If the subjects in this course of study are arranged in the logical order, the logical order does not spring from the study of the mind of boys and girls, or their future life in Belleville. It springs from the arrangement of those things as compared with each other, that is, the logical arrangement of the different subjects, because here we have Roman history in the first year, English in the second and third and American in the fourth. The English and the Roman are a preparation for the other history.

It strikes me that the Belleville man ought to know that, out of the pupils who enter his school in the first year, ninety per cent. do not go through the fourth year. So that if this plan is adhered to—giving the greatest preparation for the understanding of the fourth year—it fails in ninety per cent. of these cases, and such percentage of failure of a scheme to work is a pretty large per cent. in anything except a High School. I wonder if the Belleville principal ever asks the children in the first year and finds, out of those who are in the first year, how many are going to leave before they get to the fourth year, and makes a special arrangement for them, selecting from all this beautiful array that I see before me the things that will be most beneficial to them for the time they stay? I never knew any principal of a High School that did anything like that. No doubt there are such, but it isn't so common an arrangement as to lead you to imagine that the most of the High Schools are paidocentric instead of being themocentric. They regard the children who come to them as of minor importance to the things that they feed to them.

The next thing that strikes me as indicating that possibly the Belleville School is themocentric is that, when they come to select teachers in Belleville, they make the studies the basis of the selection of teachers. Plato thought that the educator should analyze what the educated man should consist of and then should arrange exercises to lead towards it. I don't believe the Belleville principal went out and asked for teachers who are particularly and especially expert in boy-ology or girl-ology or any of the qualities by which childhood reaches manhood or womanhood. I believe that the Belleville man, like all High School men I know of, asked for a teacher of physiology or English grammar. I think that he looked for a specialist, not for a specialist in humanity, but a specialist on subjects. Did you ever stop to think what kind of people a lot of specialists are to turn loose on unsuspecting children who have no means of getting the relative value of things?

Take these people who come from colleges stewed full of this German idea of microscopic research. They lead the poor youngsters up into a blind alley and leave them there. Each one of them is so sure that his subject is the whole earthly thing that he crams it into the boys and girls to the extent of utter mental indigestion. No successful attempt has ever been made in any High School I ever heard of to prevent the specialists in their combination from loading boys and girls with home work—which breaks the girls down, and which leads the boys to think that the whole matter required can not be done anyway, and so they study just as little as they possibly can. That is what we get from this German idea of making the system, the theme, the subject, the course of study the center; instead of doing as Jefferson and Adams and the fathers of our nation wanted us to do, to find out what the intelligent citizen ought to be and then to get to work to try to make him that good thing.

I find among the subjects in the High School where I work, a number that our good people say develop manhood. I find Latin, for instance, but I cannot understand how true manhood and true woman-hood can very well be developed by the kind of Latin that the people in our High School teach. We have selected a series of bloody wars full of treachery. We have selected certain pompous orations which I am very sure I would never have picked out as an education toward manhood. We have selected the history of a man about whom the chief thing that the children remember is that he seduced a woman and ran away and left her mourning on the shore. How are you going to teach true manhood and womanhood—how are you going to teach morality—by immorality? For there is more immorality in Cæsar and Virgil and in the Ancient Mythology than there is morality. Then you say, "It isn't the content of the subject, it is the method of the subject that we use." Then again I cannot understand you; for as I sit and watch you in your Latin class, and as I see you with your German method, making so important certain details that everybody knows are not so important after all, I cannot understand how that is developing the sort of true manhood and womanhood the United States wants to-day. And as I see you yourselves, when we have a teachers' meeting, and it is necessary in a hurry to dictate one of the numerous thousand requirements for reports that come from our unwise system, it seems to me the Latin teacher looks around to see what his neighbor is writing just as much as the algebra teacher or geometry teacher, and I cannot discover in the Latin teacher himself that development of accuracy and care which

they keep claiming to me that Latin develops. It seems to me that Latin is in our High School and is defended in the same way that good religion is defended, as a matter of faith, because nobody ever proved or experimented upon children who had been educated by Latin as compared with children of equivalent brightness who had been educated by something else. All this argument of discipline has been invented because I have Latin in my course of study and I want to keep it there, and I look around for arguments and give you these. Since these experimental scientists have come along the mental discipline claim is all going to pieces. Although we find that the person who has been educated by the study of Latin endings and Latin inflections has developed a certain amount of skill, yet it is only a skill that has to do with Latin inflections and Latin endings. The same way in algebra. You go and sit in an Algebra class, and you ask the teacher what algebra is for. She blinks, but after a while she remembers something she has been told in the Normal school, and tells you that algebra is a cultivator of analysis and judgment. That same algebra teacher, I find, is just as likely to be taken in on Wall Street or in a rubber plantation or anything that you would be prevented from going into from exercise of your judgment. So I don't know. I can't believe you when you tell me these things, unless you prove them, and up to to-day this has not been proved.

The Geometry teacher tells you geometry cultivates the reason. It would seem to me that a teacher of geometry would recognize that a man or boy has got to reason about various things, and it seems to me the same teacher should teach you the reasoning in science, or in history, but he does not. The only reasoning any geomtery teacher I know of teaches is the reasoning which is concerned with the particular subject that he teaches. That leads me to believe that the geometry teacher cares more for covering a subject than he does for the cultivation of one of those powers of manhood which he calls reasoning. Why doesn't he make the application of reasoning so that John can reason about something else than the subject about which he will never be called upon to reason after he leaves the school? I think the covering of the subject is the main purpose of every High School teacher I know.

I turn over to the geometry teacher forty youngsters and at the end of the term the geometry teacher comes back with a report showing that forty per cent. of these forty youngsters have failed to go ahead and I say, "Why is that?" The teacher says, "They couldn't cover the work." What is the work? Why do we have to cover the work? Because we must keep up the standard.

But I am a tax-payer and this is my boy. I don't care about the standard, but I do care a great deal about John and I would like to have John educated, and I cannot send him to school forever. I would like him to have from day to day some practice in attempting something that is within his powers so that he may learn to act and to succeed. But the teacher says, "Well, we have our standards, and John must keep up to our standards or he must get out." That has a familiar ring. But it doesn't sound to me like the words of a man or a woman who is working to perfect manhood. The only logical thing to be done with a boy of that kind is to put him to death, because he goes out from school and into society to debase it. He is not educated, not trained, and he joins that great company which Davidson speaks of as "the discontented," the unable, those who are the prey for the unscrupulous and the police.

It seems to me that my teachers care more for their system, more for their school, than they do for the young men and women who are approaching at the rate of one every one and six-tenths seconds to where they ought to be taken and educated into manhood. A boy or girl of fourteen years of age is not educated. You know it, and you know that you ought to care more for the boys and girls who are in your school and cannot keep up to your standards than for the ones who do keep up. In the United States to-day there are 7,660,000 boys and girls of High School age and of that number 6,600,000 are not in the High Schools at all. For every boy and girl in the High School, there are eighty-four out of the High School getting absolutely no school education whatever.

Well, what is that to us? What is it to the minister who is preaching in his church, half filled, that in his parish each year sinners are not converted? What is it to us who are working 190 days out of the 365, while every other ordinary working man, whether at the bench or desk, is working nearly twice that time? What is that to us, with our expensive High Schools operating one-fourth of the time they need be used, and all this uneducated mass outside who are not taken into the High Schools?

I can see by your faces, I can feel in the atmosphere, that this isn't the sort of talk you expected anybody to come and deliver in this place. You are accustomed to sit and have some orator of eloquence tell you how hard you work, and how difficult your work is, and then go on the School Board and give you less pay than is given to street sweepers. The reason why we get the pay of less than street sweepers is because we are so contented to do the same round over and over again, and to do it such a small portion of the time, and to see our expensive plants lying idle when there are boys in the shops or in the streets that we might get evenings and afternoons, and find out what they need, and find out what could be done to bring them from what they are to what they ought to be. That is what the highbrow definition of education is, as Thorndyke applies it, "bringing a person from what he is to what he ought to be."

When we are themocentric we are regarding boys and girls and their manhood as a by-product. The way to get at any definite thing is to "go for it," not to go in some other direction in the hope that, in some way or other, the other thing will come about. Algebra and Latin and the other subjects handed down to us from the German Universities

cannot educate boys and girls to manhood any more than an axe can get up and split wood. I think what counts is the teacher, and the kind of teacher that counts is the teacher that is thinking. The High School teacher of to-day cannot think. When teachers do the same thing over and over again they cease to think, they become mentally inactive. I met yesterday a gentleman who has been teaching Latin for twenty-five years, and he is now not teaching one line more or different from the Latin that he taught twenty-five years ago. How in God's world is it possible for a man like that to be otherwise than like his language, dead mentally? That frequently seems to be the matter with us. The patent medicine advertisers know it, because they put at the top of their tonics "Just the thing for a tired teacher"—and "tired" is the expression that naturally comes and goes with us. Here we are doing over and over again this same thing, killing our intellects. It seems to me that if I were the boss of the Belleville School system, I would insist that under no circumstances should a teacher teach a subject more than three years in succession. Even Jefferson would not let an ambassador remain abroad more than six years, because in that time he had gotten entirely out of touch with his country. What would he have said about my friend, the ancient teacher, who had been teaching Latin for twenty-five years?

We cannot meet the requirements of the United States educational theory and produce live, active all-round citizens, because the High School man is not himself an all-round citizen. He is a type and as a type he isn't the sort of man that the lover of his country would want the citizens of this nation to be like. The boy says, "I don't want to be like my teacher." Why not? Because the teacher has done the same thing over and over again, and that means death. In every other department of life it is different—they offer prizes for suggestions how they can do the thing differently or better. How many prizes have been offered in your school for suggestions from teachers or pupils as to how you can change the thing that you have? It has been said that every science is dead after ten years. It must be made over again. Osler says to the librarians, "Put into the fire any book of surgery over eight years old." How many books would we have left on teaching if we practiced that same thing with regard to it?

In science the word is "Invent." In medicine the word is "Discover." What is it in teaching? It is "Conform, keep quiet, don't bother with things, either comply or get out." It seems to me that if I were the boss of Belleville, the very first thing I would do is to bring the teachers together and say, "How many children in this town are not in the High School at all? Nobody knows? "Find out. See if there is anything that we can do for any of those youngsters over fourteen years of age that will be of any benefit to them. Do it after five o'clock in the afternoon—from five to six." Somebody will say, "They will be specials; they won't take the whole course of study." God never made the whole course of study; but He made these children to be benefitted; and I would make an arrangement by which we could do something at night for the children who are in the factories, if I were in Belleville.

For the pupils who can come regularly in the day-time, I think I would get my faculty together and ask, "Do you think of anything that would possibly be more interesting and more educative toward manhood than the things that we are teaching now?" Somebody would say, "Yes, I can. I think I could teach some kind of English that at the end would not result, as this College examination English does, in making a boy or girl conclude that they never want to read any English again." Some of the things people are talking about now could be studied. We had a little class on Current Events once. Why isn't the study of the events around us at the present time as rich in mental discipline, as rich in information, as rich in opening up the eyes of those who are growing to be men and women in 1910, as valuable as the discussions of how the Roman Consul was elected? I think we would find somebody in Belleville who would undertake to teach such things two or three hours each week, taking up the history of Belleville and the State of Pennsylvania and its civics; and I think that after a while we would get somebody to say, "I am going to give a course in occupations. The purpose is to give the men and boys and girls an inkling as to what the various occupations in American life are, what their operations consist of, and what the openings are."

It doesn't seem to me that, if once the bonds were released, it would take very long to get Belleville so that it could hold up its head and hands and say, "Here is a High School that is endeavoring to study the children of its community, to serve them, and to lead them towards a more effective life here and now." You would not lose your geometry, you would not lose your Latin, and you would not lose these old subjects for which there are still enough people in town who want the same sort of studies that their fathers studied. It is for you to act, you, the teachers of the High School who are most benefitted, because just as soon as you leave these old treadmill rounds and begin to invent and begin to discover a new field, life will come to you compared with which what we are now doing is nothing. I know the delights of doing the same thing over and over again. I know the delight of going back on Tuesday and knowing there isn't a single page in all those studies I cannot cover, because I have covered them before. But it is the delight of a lazy cat before the fire. There is no thinking in it.

My friends, it seems to me that we are on the eve of one of the most important and one of the most tremendous changes for service in this country we have ever yet seen. You and I were not born into this world, and you and I did not go into this calling of ours, with the idea of defending and protecting those old things because they are old. You and I went into this work for the purpose of serving the children of our community. We went into it with the hope, with the desire, that we might

realize the dream of our fathers in producing citizens who in the next generation will turn back that flood of crime and—more's the pity,—of youthful crime which has increased in this country twenty per cent. above its population since 1890. We came into teaching that we may aid in training the citizenship of this county to high ideals.

We were not born to tread in a mill. We were not born to be hired men and women, working with old tools not our own, but we were born that we might bring life, and that we might bring it more abundantly.

WEDNESDAY MORNING.

THE closing session of this department was called to order at 9:30 a. m. by President Charles S. Davis. The first paper of the morning was by Prof. Edward Rynearson, director of the high schools of Pittsburgh, on

SOME PROBLEMS OF TWENTIETH CENTURY.

What I have to say on this subject will be only a faint echo of what has been better stated in some of the recent books and of the many excellent papers on this topic that have been read before this and other educational meetings in this country.

The Academy gave boys and girls not preparing for college a training along lines of culture as well as those of practical efficiency. Neither the academy nor the preparatory school was connected with the elementary school, and they were not free. The high schools were an outgrowth of the elementary school, and have increased in numbers and efficiency because they do the work both of the college preparatory school and of the academy. Many problems common to elementary and high schools are caused by the differences between the method of teaching the adolescent and that of the pre-adolescent. More of the harsh criticism aimed at the high school is due to the adolescent's peculiarities, his changing moods, his feverish desire to earn money, and indulgent parents, than to poor teaching, although many teachers do lack tact and sympathy.

Dr. E. E. Brown, in "The Making of Our Middle Schools," says that the threefold purposes of the high school are a better adjustment of our secondary schools (a) to schools above them and below; (b) to the individual capacity of the students found in those schools; and (c) to the changing needs of our social life.

How can the high school and the college be better adjusted? The Committee of Ten truthfully stated that the secondary schools are not primarily for the preparation of students to pass special examinations for admission to college. The chief purpose of these schools should be to prepare boys and girls for the duties of life. The Committee specifically stated that the preparation of students for colleges and technical schools should be an incidental, and not the main, object of the average secondary school, that the Committee indulges the wish "that the college and the scientific school should be accessible to all boys or girls who have completed creditably the secondary school course." One of the problems of the high school will be to plan a course of study, or rather a course of instruction, closely articulated with the elementary school below, that will enable the graduates to enter one of our higher institutions of learning, "no matter what group of subjects he may have mainly devoted himself to in the secondary schools."

The standard of admission to colleges must not be lowered so far as ability to do college work is concerned. The colleges must be assured that the proposed studies not now accepted for admission to college, are, or will be made, equivalent in educational worth to the present demands. Ability to do college work is, or should be, the prime requisite for admission to college.

Teachers of science have the same difficulty as teachers in other subjects in developing power in their pupils, but their greatest problem is to get their pupils to apply the information and power to every day affairs or to another subject. Dr. Herrick states this problem concisely when he says, "If our curricula were made to cultivate intellectual power and the acquisition of the ability to apply power to the matter in hand, the training of secondary schools will render the double service of making subjects of instruction more practical, and practical affairs more intellectual. The old division of studies into educational but not useful, and useful but not educational, is fast disappearing."

In planning the courses of study for our public schools, we must ever keep in mind the needs of the community. The course of study used in *our* schools may not be the best for *your* schools. This does not necessarily mean that only the so-called bread-and-butter subjects should be prescribed. A better living, however, often enables one to live better. No half-clothed, half-starved nation has done much for science, literature, art, or civilization. The individuals of the community should have all the education and the kind of education for which they have the capacity and which they need. One of the duties of an educator is to try to make the wants of his fellow citizens coincide with their needs.

The graduates of our secondary schools ought to be able to earn their own living as well as to be able to do their part as citizens and to enjoy the refined pleasures of life.

Lack of time and ability forbids my naming all the studies that should be included in a course, the order of these studies, and the exact number of minutes to be given to each (one college says forty minutes, while another says no credit will be given for less than five recitations per week of forty-five minutes each), and the text-books, methods, etc., to be used. Every four-year course (I wish the twelve years might be divided into six and six years) should require at least three and if possible four years of English, three or four years of foreign language study, two years of mathematics, one or two years of history (the last year of school should be devoted to United States history and civics), one or two years of science (if two years, one should be general and given in the first year

and the other specific and given in the third or fourth year), and some time should be devoted to drawing, to music, and to physical, manual, and vocational training. These should be included in every general high school course of study. Permit a pupil to select from several courses—general, scientific, technical, commercial, classical—under the advice of teachers who know the pupil's capacity, environment, wants, and needs. Our commercial courses must provide for those who want a preparation as well as for those who wish to be bookkeepers or stenographers. Both prescribed and elective studies are needed. As Professor Hanus says in his "Educational Aims and Educational Values," "Prescribed studies are needed, lest the pupil should miss the vocational, social and ethical enlightenment, on the one hand, and an appreciative understanding of nature on the other, together with a development of the corresponding powers; a considerable range of elective studies is required for attainment of the elements of general culture, so far as that is not covered by a group of prescribed studies, and for the discovery and appropriate development of dominant interests and powers."

The adolescent will acquire habits of indefiniteness, of inaccuracy and of laziness, if he is permitted to roam at will over the fields of literature, of science, of history, etc., trying to find the easiest road to an education. However, it should be possible for those who can not finish the entire course, to attend high school as long as possible and to take such subjects as they want. These may show the value of, and arouse the interest in, the studies prescribed for graduation. In any event if the pupil can attend only one or two years, a special course carefully planned will probably be better than this same time spent on a part of the entire course. Dr. R. P. Halleck says, "Interest is knowledge moved into the king's row on the checkerboard."

We have learned much about courses of study from the evening schools. Over fifteen hundred young women attend the Pittsburgh Evening High School three nights every week after working hard all day. Why? Because they are in earnest, they have come for a distinct purpose, they get what they want, they are preparing to fill their present positions better or better positions presently, they have many of our best teachers from our day-school faculty, they have the entire equipment of the school plant placed at their disposal, and the Central Board of Education meets every need as it arises. Some thought that many of our day pupils would go to work and then attend school in the evening. Only a few have done this, and they would probably have quit at any rate. During the three years of the existence of the Evening High School we have prepared a few who have passed the entrance examination to college. Several pupils over twenty years of age have seen the need of a thorough education, and have left lucrative positions to enter the day high school. Many students over thirty-five years of age have enrolled and one who is fifty-five. The daily papers deserve much credit for the part they have had in the success of the new departure in the educational affairs of our city. The high school as an institution has been placed before our community in a new light. No longer is the high school regarded as a place for the few who do not need to work; it has proved that it has a deep and abiding interest in the welfare of all who want an education. Freedom of electives together with personal interviews of the pupils' with the heads of the departments has given us much insight into the essentials of a course of study.

More important than the content of a course of study is the spirit of the course of instruction. Make the atmosphere of the school room redolent with the life and activities of your respective communities. For supplementary work in German, English, mathematics, etc., use local names and illustrations. Our rural schools should train pupils to love the farm rather than to seek the city. In most of our cities there are great opportunities for men along industrial and business lines, yet the spirit of the school and of the home influences the boys to enter the professions or clerical pursuits.

The time is not far distant when the high school will demand a healthy body both for the pupil and the teacher. It is ridiculous to plead for an all-round education and then neglect to make provision for the maintenance of health during the period of adolescence. Step into many of our school houses: you will notice the impure, dusty air that is being rebreathed many times per hour, the insufficient light, and the ill-fitting and poorly arranged seats and desks, the improper heating, or the lack of sufficient facilities for regular, systematic exercise. The progress of improvement in development and general health should occupy as important a place on the report card as does the pupil's conduct or his knowledge of ancient history. If parents do not explain the meaning of adolescence to their children, then the school must emphasize the importance of sex hygiene and physiology, lest these children get their information from improper sources. Our young people should not pass ignorantly through this period fraught with so many dangers to the body, to the mind, and to the soul.

In the near future we shall find more high school buildings with more teachers and fewer pupils to a teacher. Tax-payers will see that it is a poor investment to put thirty-five, forty, fifty, and even seventy-five first-year pupils in one class in algebra, Latin, or English. Pupils in large classes do not get sufficient returns for the time and money spent. The best educational opportunities for the son of the rich man are none too good for the boy who has not had the advantages of books, pictures, music, etc., in his home. With small classes we can do much more individual work. When John gets behind in Algebra he may be placed in a room under a special teacher after school for one hour each day until he is able to keep up with the class.

Individual work is especially necessary in English. Bad habits of speech are more difficult to overcome than the advanced work of many other subjects and they vary with the individual. Teachers of all subjects should demand and accept only work that is correct in every particular. One writer intimates that

teachers who permit incorrect English are training for illiteracy. All teachers agree, I believe, that English is the most important subject in our schools. This is true not only from the practical point of view but also from the wide fields of enjoyment that are open to our young people. The degree of culture and refinement that we possess is often estimated by the facility and precision with which we use our mother-tongue. Sufficient time and teachers must be given to laboratory English if we wish to derive maximum benefit from the high school. We complain that we must do work that belongs to the colleges. This is not true in English. Ex-President Eliot in "What is a Liberal Education?" says, "So little attention is paid to English at the preparatory school that half of the time, labor, and money that the University spends upon English must be devoted to the mere elements of the subject. Moreover less than half as much instruction of proper university grade is offered in English as in Greek or Latin." To be more specific than Dr. Eliot, the colleges must give much attention to the mastery of outlining, spelling, punctuation, sentence-structure, and paragraphing. This work ought to be done in the high school, not so much for those who go to college and there get the drill, as for those whose systematic training in English ends with the high school.

There has been much, and there will be more, discussion concerning the different methods of promotion. It should be possible to promote the pupil in everything except algebra or vice-versa, and it should be possible to promote him not only once, but twice per year and, if we really consider him of more importance than the schedule, we shall promote four times each year by subjects and not by groups nor by general average. It is not fair for a pupil to be required to repeat algebra in which he has passed, merely because he has not passed one or all of his other subjects. On the other hand, it is not fair to hold back an entire class in Caesar because a few have been promoted on general average although they made low grade in first-year Latin.

One of the great duties of the high school is to teach boys and girls to become self-reliant men and women. To be able to prepare their lessons unaided, is a great step towards mastering new complications as they come up in everyday affairs. Dr. Suzzallo, in the introduction to Dr. Earhart's excellent book, Teaching Children to Study, says, "The deliberate effort to teach children to study is more than an addition to the school's task; it is a change in the emphasis of school instruction. Hitherto the teacher has spent most of his time in transmitting to the child the symbols of language and the facts of knowledge. Hereafter the school bids fair to devote its best energies not to memorization, but to teaching the child how to think, how to direct his own conduct intelligently, how to study without constant dependence upon the teacher." Ignorance of how to study is one of the greatest sources of waste in our schools. Oil may not give added power to machinery, but by reducing friction maximum results are obtained. Proper methods of study may not enrich the curriculum, but they do make possible a high degree of efficiency in the school.

In the attempt to cover a prescribed amount of a subject during a term, teachers often use the recitation period largely for testing what the pupils have learned rather than in showing them how to learn it. The lecture method cannot be successfully used in the high school, especially with first-year pupils. These first-year pupils are often plunged so suddenly into each new subject by a different specialist, that they do not readily recover from the shock. This year the first-year pupils in the Pittsburgh High School have for every subject one period each week in which the teacher may emphasize the points not clearly understood by the pupils as shown by their written and oral tests, may develop a new subject, or may do special work with one weak group and assign extra work for the leaders. We are trying to get a better foundation and thus lessen the number of those who, becoming discouraged, drop out before the end of the year, or do not return for the second year. Pupils are taught to study: they are helped to help themselves.

If the greatest benefit is to be derived from the school and the studies, the home must lend its hearty co-operation and see that the high school pupils regard their school work as seriously as they will regard their regular business or profession in later years. Lessons must be prepared at home. A reasonable amount of home study from normal, healthy pupils is necessary if their daily tasks are to be properly mastered. They need recreation, but they should be protected from dissipation. Two or three hours in the evening spent on lessons will do them more good morally as well as intellectually than gadding around on the streets. If you want to know one cause of so many pupils leaving school, go to the streets of our small towns and the suburbs of our cities from eight to ten o'clock at night and see the crows of boys and girls there. Supt. Greenwood, of Kansas City, Mo., says "There should be simplicity in dress, work, social diversions, but earnest and serious attention to the work of the high school. High school youngsters need more hours of sleep and less of society and public entertainments. To average human nature these lighter gayeties that occupy the attention in high school, college or university life, appeal more ardently than the acquisition of knowledge for the sake of knowing in order to satisfy a steady purpose to become a scholar." This may mean that while athletics and other activities have their place in high schools, pupils should be making satisfactory progress with a full schedule before they may represent the school in any public performance of the chorus, the debating club, athletics, etc.

To overcome this looseness of ideals we must definitely plan our work so that habit formation may be one of the objects of the lesson. Bad habits must be broken up and good ones substituted. For this reason drill work is necessary. To be educational, an education must cause one to think, and to think intensely, clearly, and persistently on any subject whatsoever. It is worth while to train our people to do automatically as many

good things as possible so that their powers may be directed to the mastery of the greater or unexpected complications that will confront them if they take the initiative in any undertaking. To form good habits in pupils is more important than to give information.

Discipline demands wise sympathy, tactful restraint, and a square deal on the part of the teacher. These will inspire abiding confidence and cheerful co-operation among the pupils. The demerit system is useful to keep an account of the irregularities of the school, such as unexcused tardiness and absence and other minor infractions of school rules. This system, excellent as it is, may be destructive of good ethics because of weak, unsympathetic teachers or because the pupil hears only of his offences when he has received the maximum number before suspension. Many college students think they have a moral right to stay away from their recitations so long as they have less than the allotted twenty-five unexcused absences. Pupils should be called strictly to account for every violation of sensible school or civic rules.

During the past year we have gradually introduced a plan of co-operative government in our Central High School. This does not mean that the pupils govern themselves any more than that they teach themselves history or geometry. The pupils in these subjects recite what they have studied. The teacher will lead his pupils to express their opinions but he is the guide. So it is in our scheme of government. The general assembly, composed of two pupils from each class, and the supreme council, composed of nine pupils chosen from the general assembly, are the "classes," so to speak, where the pupils express their ideas of school government and outline policies. The spirit of co-operation is spreading and has done splendid work so far. The pupils have undertaken to assist in only a few matters, but their work has been effectively done. In one room the representative finished the recitation when the teacher was taken suddenly ill. In another the representative conducted the devotional exercises during the absence of the teacher. In a third room, where we had a weak substitute teacher, the representative secured the written promise of the boys that they would refrain from future misdemeanors. This training means much for our school. Each pupil may develop a strong individuality and become the personal pronoun "I" that can stand alone. They plan for the common good. In forcing one of their friends out of the supreme council they were able to put aside personal likes. The ideal sought and developed in the high school in this way may be the salvation of some community in the future. Wide-awake, competent leaders must be developed in the high school as well as loyal followers and powerful helpers.

The social life should not be neglected, repressed, undirected, nor yet uncontrolled during this important period of the pupil's life in the high school. The very fact that there is a general craving at this period for companions indicates that it is natural and should be satisfied. This is the most social period of life. There is a far greater danger in solitude than in companionship of the right kind. In organizing clubs, and so forth, for these pupils we must look into the future. The boys that may organize a fraternity may be the best boys of the school, but experience tells us that fraternities have no place in the public high school. The spirit that prompted the organization should be directed along approved lines of service to others. This will give a healthy growth to the social life. To do this requires the firm, sympathetic hand of teachers and principal. Pupils who help others will soon appreciate that it is more blessed to give than to receive. Here again we need the earnest co-operation of the home.

Some writers quote statistics to show that an education fits a man to win fame, to make money. Some people say that they are willing to be taxed for the support of the high school in order that their children may secure an advantage over other children. They fail to recognize that all may receive the benefit of an education. The money made and the offices secured on account of higher education are to be valued for the sake of possibilities of service that they offer; these in themselves are not the end but only the means. Our high school boys and girls should be taught that education is not so much to prepare for competition as for co-operation; not so much for improvement of the individual for his own sake as for his social efficiency.

There are many more problems of the twentieth century high school, known and unknown, that can not be even mentioned here. The complete solution of the problems, past, present, and future, depends largely upon one factor that has not yet been considered. I would not minimize the value of a six-year course for the high school, as this would afford greater opportunity to meet the needs of those who go to college as well as of those who do not go. Vocational subjects will be introduced into all of our best schools. Broad elective courses will give equal opportunity to all. The evening high school, the summer sessions during the day as well as at night, and special courses adapted to the wants of individuals, will meet the needs of many who would otherwise be deprived of the advantages of a high school education. The school-house and its furniture will be made to suit the needs of the children. Economy and interest will secure smaller classes. Accuracy of expression in mathematics will materially aid in the correct use of the mother-tongue. Pupils must be promoted when the work is done satisfactorily. The ability to study and the formation of correct habits demand the serious attention of the school authorities. The home sends the child and should lend its hearty co-operation. The high school should not encourage dissipation through outside activities. Discipline must develop mutualism through self-control. True democracy will result from the proper social activities and will lead the pupils to realize that the goal of school and of life is service to mankind. More attention will be given to the work and teachers of the first-year pupils.

Important as all of these are, the teacher is, and ever will be, the supreme factor in the school. He should have a broad education. Supt. Brooks says, "Sometimes the efficiency

of a teacher decreases in proportion to the square of the distance he has gone into his subject." The thought-plane of a Ph.D. is frequently too high for the pupil. A teacher, however, who can bring to his classes some fresh bit of knowledge just discovered by himself, unconsciously introduces the spirit of research into his pupils. Breadth gives ballast to depth.

The college that has its ear to the ground hears in no unmistakable tone that it should offer a normal course to those preparing to teach. It is a serious mistake for young people to go into our high schools as teachers without a knowledge of the problems of education and without practice in presenting a subject. The apprentices will gain confidence in themselves and will avoid the mistake that most of us made in beginning our work with the children where we left off in college. They should be trained to know the school as a unit and assume their part of the responsibility.

The teacher must be a radiator. He must be sympathetic with the whims of the adolescent. A good sense of humor will often win where everything else fails. A proper amount of dignity is not inconsistent with friendliness with pupils. The whole child will be educated when he is taught by a whole teacher. Many of us remember reading in McGuffey's Sixth Reader, "Talent is something, but tact is everything; tact is power, tact is skill; talent is weight, tact is momentum; talent is wealth, tact is ready money. For all practical purposes tact carries it against talent ten to one."

While some might consider manner, neatness of dress, personal appearance, smoking, tidiness of hair, of teeth, of nails, of linen, etc., to be matters of little or no importance, yet they have a lasting influence upon the young people at this formative period. If I had the selection of a high school teacher I should desire to have a teacher as free as possible from everything that would weaken his influence among his pupils. There may be no harm for a teacher to smoke, but his arguments as to why boys under twenty should not smoke do not carry nearly so much weight as if he did not use tobacco himself. The schools do not want namby-pamby teachers, but they do desire teachers whose judgment, actions, and conduct will be respected by the pupils.

If programs of conventions are well planned, teachers may get much help from the papers and they gather much inspiration in meeting teachers from other sections of the country. An exchange of ideas may be mutually helpful. During the year he will read some educational magazines and one of more professional books. Many of our summer schools give teachers an opportunity to study under the leaders in education. Every high school teacher should write at least one paper on some phase of high school work each year. Nothing gives a teacher definite convictions more quickly than to write out his own creed after reading what other educators have written.

His reading and thinking and working, however, should not all be done directly for his school. While he is a teacher, he should at the same time be a citizen. He should be a power for civic righteousness in his community. He may not be active in politics as the term is generally used, but he should have definite ideas upon the current and local issues. His participation in musicals, in athletics, and in various activities, endears him to the pupil and pushes out the boundary of his influence to wider and wider circles.

His morality should have the vivifying, fructifying influence that comes only through religion. The age of adolescence is the age of conversion. It may be that a non-religious professor may have little influence upon the college man, but the high school teacher should be an active religious worker. Here as in no other place the pupils cannot rise above their teacher. It is appalling to think of the harm that a teacher who is an infidel or an agnostic may do among young people during the time when their minds and hearts are so impressionable.

In all of our planning for the high school we must never for one moment lose sight of the great object of the school—the child. In our gropings through the dark, a little child should lead us. When tempted to teach our subjects instead of the children, when the things intellectual crowd out things spiritual, then let us say what Judah said to Joseph about Benjamin: "Thy servant became surety for the lad unto my father. . . . . How shall I go up to my father and the lad be not with me?"

The second paper on the same general subject was by Prof. S. E. Weber, dean of the School of Liberal Arts, Pennsylvania State College.

PROBLEMS FOR TWENTIETH CENTURY HIGH SCHOOL.

I shall not presume to propose nor to discuss all of the problems that the twentieth century high school will be called upon to solve. In our efforts to meet those problems we should be guided, as far as possible, by the experiences of the past. The progress we have made toward realizing the ideal of giving to each individual that training which makes most for his industrial, social, and political efficiency in a democracy constitutes a rational foundation for future progress.

In view of the service the public high school renders to the maturing individual and through him to the state it occupies a unique position. With a wider and more advanced range of organized activities and subject-matter than the elementary school it contributes more to the general intelligence of a people. By adapting its curricula to the needs and traditions of the community it utilizes its best resources. In the last analysis, the public high school will have gone far toward solving its present and future problems if it give the individual the necessary general information to see things in their broader relations, to trace out their causes, to enable him to feel at home in his environment and if it give him sufficient specialized training to enable him to find his place as a useful member of society, to find the work he is best fitted to do and will be the happiest in doing. So much the better if such

an insight lead him to continue his education in a still higher institution of learning. It is frequently the case that the individual does not discover his proper place before he completes his college course.

If the foregoing is a correct statement of the function of the public high school, it must follow (1) that the opportunities of a high school education should be extended to all pupils completing the elementary school course, (2) that all courses of training offered in high schools should have represented in them every one of the five fundamental strands of human knowledge: linguistics, mathematics, inductive sciences, history and civics and art, (3) that "increasingly high standards of intellectual power in the individual be rightly insisted upon, no matter what differential studies he may later pursue," (4) that the public high school is not a trade school, (5) that the number of differentiated courses should be sufficient to meet the needs of the immediate community and, to the extent that the expense is warranted, to meet the variety of individual needs, (6) that all of these courses should lead to higher institutions of learning where the individual may follow advanced work in the course pursued in high school or some other college course, and (7) that the training to be obtained in any of the courses does not depend so much on the number and kinds of courses as on the efficiency of the teachers employed.

1. In the larger centers of population the elementary grade pupil may enter any one of the different forms of high schools after he has completed his course. The number of different kinds of high schools and the variety of courses offered correspond fairly well to the variety of activities of such centers of population and the diversity of individual preferences. In the smaller towns and in rural districts where the little red school house exists, where there is little unity of educational effort, where there is either little or no effective supervision, where educational ideals are not so high, where the per capita wealth is usually less than in cities, where in consequence the rural high school worthy the name is—in many cases, still an unrealized dream, no high school education comparable to that offered in cities is available. Is it any wonder that farms are depleted, that urban centers are crowded, that tenant farmers are becoming more numerous, that the country boy and girl and that the rural school teacher are looking city-ward?

The problem of the rural high school must be solved by this century if we are to maintain the proper balance between two interdependent populations, rural and urban. This is a problem that might well receive the attention of educators and statesmen. Might it not be that the conservation of our resources depends largely upon its solution? I am unable to see any other solution to this problem than that the educational opportunities of the country must be made to approximate those of the city, that departments of agriculture and domestic science should be introduced into existing rural high schools in agricultural communities, and vocational subjects of an appropriate nature in other industrial communities, and that the quality and quantity of instruction and equipment be on a par with the best found in city high schools.

In Pennsylvania the present system of inspection of such rural high schools by state high school inspectors has disclosed the number of teachers devoting their time exclusively to high school work and the length of term in such schools. One of these inspectors has recently given, in a public address, a partial report of the quality of teaching found in such schools in the elementary as well as in the high school grades, their inadequate equipment to teach English, history, and the inductive sciences, and their disregard for the educational values of the different secondary school subjects. These men are rendering an invaluable service to the state by gathering such statistics, by advising with superintendents, principals and teachers with a view of improving existing conditions.

But a small percentage of the students in the public high school ever enter college, so that entrance requirements of a college or university form only a minor consideration in a system of inspection controlled wholly by a state department of education. With such a broad basis of operation inspection by a state department of education has larger powers and a wider scope of function. State inspection, re-enforced by sufficient legal authority and adequate state subsidy, can accomplish for at least the smaller high schools what no other form of inspection can hope to effect

2. In our adjustments of courses of study we have gone from one extreme to another, beginning with a rigid, inflexible course, followed first by the institution of parallel courses, then the introduction of certain options, and ending with entire freedom of election of courses and studies. But there is a recent tendency, which is fast gaining ground, to insist on certain constants typical of the various forms of knowledge, varying in amount to suit individual needs. The conclusions of the Committee of Ten, the College Entrance Requirements Committee, and of the thoughtful principal who guides the student's choice of studies under the elective system have much in common. So that the theory, that every high school student should be brought into contact with all of the principal sources of human culture, is gaining wider acceptance in secondary school practice.

By having a fixed number of units constant in English, mathematics, science, history, and art and by operating the group plan each high school student may have a great range of subjects in the larger high schools but will still have a well-organized curriculum whose completion will stand for something definite. Whether the student's major interests lie along the lines of science, art, modern languages, mathematics, history and civics, vocational studies, or even Latin and Greek, he is given "vital" training in the group of subjects that appeals most to him and a general training in the other groups. Unguided selection of electives appeals to me as more harmful than a rigid course

3. There is practical unanimity of opinion that the choice of vocation should be deferred as long as possible in order that the student

may experience the widest possible range of culture and develop the ability to think intensively along any given line. Such experience and power of thought prepare the way for the selection of a proper course in life. The present variety in the length of the high school course is a problem pressing for solution. Shall the usual line of separating the high school from the elementary school at the end of the eighth year prevail or shall the break occur at the end of the sixth year, as is the plan in certain cities and at least one state now, or shall the high school rest on a basis of seven elementary grades, as in Kansas City and all of the southern and some of the western states, or shall we have a three-year high school course resting on an eight-year elementary basis as do the manual training high schools of Philadelphia? Shall some of the high schools in the larger towns and cities remain open for day and evening sessions the entire year? Shall special provision be made by which the brighter pupils may complete their high school course earlier than is possible for them at present?

4. For a consideration of the fourth general statement let us hear what the state superintendent of public instruction of Nebraska, Mr. E. C. Bishop, has to say concerning making the high school a trade school:

The course of training offered in the secondary school should be sufficiently localized to present to the child the realities and the possibilities of his environment, and at the same time retain the necessary balance of general, cultural branches. This means that in the agricultural community, in the manufacturing community, the mining community, the fishing community, the lumbering region, the child will find through his school duties an insight into home life which will lead him to know and to feel the beauty, the opportunity, the duty and the rewards that come from an intimate acquaintance with all the good about him.

Such education will assist the youth to a sensible choice of vocation, and will enable him at an early age to utilize the means at hand all the way along for preparing himself best to enjoy the vocation of his choice, and to enrich his vocation by the addition of early, earnest devotion to it.

There may be inherent qualities in the youth which will lead him away from the vocation suggested and encouraged by his home community. If such be the case, as it often is, the acquaintance with and the best possible enjoyment while there of the home environment is ethical training of good degree which strengthens the youth in his application to whatever vocation he may choose.

I am not an advocate of turning our secondary schools into trade schools for the great body of American children. I favor, first, the elimination from the secondary schools of all subjects which, when properly handled, do not contribute to the right ethical development, and the elimination of subjects which have been placed there for ethical culture alone but which can be supplanted by other subjects of equal value in ethical training and which, in addition, bring to the child sane ideas of beauty of nature, the field of literature, the artistic art in manual skill, and the dignity of all labor necessary to the maintenance of a home in a civilized community—a home where the good things of life are appreciated, demanded and secured by labor—labor with the hand, the eye, the intellect and the heart.

Trade schools serve a useful purpose in providing for delinquents, defectives, unfortunates and for bright, ambitious children who early choose vocations, and early seek preparation therefor, where at the same time they may receive the proper degree of the broader education due every American child. But trade schools should not draw from the secondary schools the great body of children who can be kept therein by the training which should give sufficient opening for the training of the home life in such a manner and degree that the child sees through the home and its duties the means of development for the fullest enjoyment of the larger life. (N. E. A. Proceedings—1909—pages 497 and 498.)

5. It is then through such high school courses that the immediate interests of the community are best served and the individual is to be led to see and to choose his path of duty as a social unit. But there are a number of other factors to be taken into consideration before courses of study in the smaller high schools can take definite form. How much equipment, how many and how well trained teachers in elementary as well as high school grades will the financial condition of a community provide for? What is the minimum number of high school students per teacher? What are the subjects and to what extent and by whom shall each of those subjects be taught that are intended as the means to attain the ideal of secondary education in each case? What about the necessary logical sequence which must be observed in the teaching of certain subjects? Has the pupil the maturity to pursue successfully the subject specified in a certain year? How much time is at the disposal of teachers and students to do the work required to complete a certain course or courses? What are the student's physical limitations that must be taken into account? What constitute adequate equipment and reasonable time units to get the most satisfactory results in the class recitation? Shall the high school teacher and high school pupil confine themselves to the teaching or studying of a few closely related subjects through several years or shall they flit about from one subject to another during the same year or different years? Shall the effect on college entrance requirements continue to be taken into consideration? What shall be the length of term for a state approved high school?

6. What shall be the conditions under which high school courses should lead to higher institutions of learning? From the Central West comes the demand for the complete autonomy of the public high school. Recently the High School Teachers' Association of New York City and three departments of the National Educational Association passed resolutions asking for a reduction in the college entrance requirements in foreign languages and the acceptance of such subjects as manual training, commercial branches, music, household science and art, agriculture—when well taught and

thoroughly learned—as electives or standard subjects for admission.

Upon the broad basis that all forms of educational institutions, both public and private, are a part of our system of public education there can be no such thing as complete autonomy of any one of them. The human body might just as well disclaim the need of any of its members. In passing from one elementary grade to another or from the elementary school to the high school the question is asked, Can the pupil do the work of the grade to which he has been promoted? Why should not the same question be asked with equal propriety when the student passes from the secondary school to the college? Up to 1893, and to a certain extent up to the present time, we have been standardizing public as well as private secondary schools with a view of meeting college entrance requirements. Now the time has arrived to standardize the colleges also. Few who that know the work of both high school and college will deny that the quality and quantity of advanced work done in some public high schools excels that done in some of the colleges? But both institutions have a common interest in the solution of common problems. An exchange of ideas concerning such problems is profitable to both.

A still larger addition of successful teachers in public secondary schools to college faculties would bring about a more rapid solution of how the transition from the high school to the college is best made. Personal visitation of high schools by representatives of college faculties is of mutual value. Quoting from a recent address: Besides, educational ideals, emanating from colleges and universities, will be disseminated throughout the life of the community if there is close articulation between these higher institutions and the high school. The intellectual and social tone of the community will be raised. Many a worthy and ambitious high school student will be stimulated and encouraged to continue his education. An accessible and efficient high school is an additional advantage to any community on this account. The counter-effect on college and university is also beneficial, because they are brought into vital contact with the sources of their growth and development. (Pennsylvania State College Commencement Proceedings—1910—page 18.)

Since but a small per cent. of high school students go to college the first duty of the high school is to serve the interests of the majority of its students. Likewise, the college of high standards should adapt its entrance requirements to the standards of first-class high schools. It seems reasonable that the number of units allowed as electives should be dependent upon the number and kind of courses the college has to offer. In the university where most of the courses offered in the high school are continued along more advanced lines the problem of adjustment is solved if the student continues the lines of work begun in the high school. If he does not, the problem of adjustment is similar to that in the small college. Some credit should be given for some of the subjects suggested, as, for example, mechanical and freehand drawing, commercial geography and commercial law, but what will be the basis for rating such subjects as stenography and typewriting, elementary and advanced bookkeeping? Should the high school ask the small college with high standards to make such concessions?

7. Superb buildings, modern in their physical and hygienic appointments, supplied with every mechanical facility for teaching purposes and an ample variety of high school courses skilfully planned and organized to meet every present and future need are after all secondary means employed to develop high school boys and girls into men and women of greatest worth.

The master-mind of a strong principal must determine the course of study. The training derived from the study of mathematics, English, manual training Latin, sciences, agriculture, history and civics, or any other high school subject, does not depend so much on freedom of election of courses and studies, real or apparent interest in any of them, as it depends on the quality of the teacher teaching the subject. Fullness of knowledge of his subject, ability to create in his students an interest in the same and a power to master its difficulties, love for his pupils, and an appreciation of his work as a means to develop real manhood and womanhood are still the essential qualities of a great teacher. The greatest problem the twentieth century high school must solve is how to secure such teachers. By renewed and properly extended efforts to prepare such teachers American colleges and universities may render a distinct service to the high school.

The next topic on the program was "Imperfections in Our Pennsylvania High School Legislation," upon which Prof. W. S. Hertzog, State High School Inspector, read the following paper:

IMPERFECTIONS IN OUR PENNSYLVANIA HIGH SCHOOL LEGISLATION.

Three years of high school visitation and supervision by the state have revealed not only the weaknesses of the past but something of the possibilities of the future as well. If much has been accomplished in proper classification of the schools and in establishing more uniform standards of excellence, there is more to be done in the future. The purpose of this paper is to point out some of the additional legislation that might aid in securing greater efficiency in the schools themselves, and in bringing their advantages within the reach of all who desire their opportunities.

When the legislature first provided a special appropriation for high schools, it wisely defined a maximum of $800, $600, and $400 in the three grades respectively. Under the conditions prior to the act of Assembly 1909, equal gross amounts were appropriated to the boroughs and townships, and this resulted in the very unequal distribution last year of 100 per cent. of the maximum to the townships and only about 56 per cent. to the boroughs. This was not due to any inequality in the schools in regard to merit or in regard to need of aid, but solely because there were so many more participating boroughs than townships. The last legislature made the equitable provision that all schools of the same grade whether borough

or township should share equally. Unfortunately the gross amount of money to be divided was not increased, but diminished, by the sum of $50,000 for each year, for reimbursement of boards that pay the tuition of their pupils attending high schools in other districts. Owing to this increase in the number of schools and to the higher classification of many because of their effort to meet the requirements in the first or second grades, the distribution for the year 1909–10 is on a 50 per cent. basis to all schools in all grades.

It takes no argument to show that appropriations of $400, $300, and $200 are inadequate as incentives to increased expenditudes in the effort to reach higher standards. I believe that the time has come to define more definitely the requirements in the various grades, regarding libraries and laboratory equipment and recitation periods per teacher and possibly along other lines, but such efforts will be futile unless the state meets its obligation by providing the maximum appropriations according to the law. $800 is much smaller than the sum granted in some other states and is really a small item in the maintenance of a first grade school.

I visit many schools of the third grade that have received several special appropriations, but have nothing to show for it in the way of supplies or equipment. Would not the law be improved if it required that 50 per cent. of the appropriation should be spent for books, maps, pictures, or apparatus? In our effort to distribute the rebate for non-resident tuition, many new problems have arisen. There was no knowledge upon which to base that appropriation of $50,000 annually. While it has aided very much in overcoming the opposition to the payment of such tuition by boards that could not reach the required number of twelve high school pupils, yet it has proved inadequate. It is estimated that boards will receive about one dollar for each month of tuition aid and the tuition usually ranges from $2 to $5 per month.

Enough has been stated perhaps to show that there is a great need for about twice as much money as the legislature has been appropriating for high schools. It would be folly to advocate such an appropriation at the expense of the common schools. The high school is most deeply concerned in every agency that will render the common school more efficient and this desired result cannot be accomplished with less money.

It is the desire of the Department of Public Instruction to increase the efficiency of the schools that have been organized rather than to multiply the number of schools that have a precarious struggle for existence, under conditions that are anything but enviable. The tendency of the times, however, is to bring the high school within the reach of every boy or girl desiring its privileges. To attain this result it may be necessary to organize some additional schools. When such a necessity arises, it is imperative that there be a thorough understanding of the situation. Under present conditions, there is a period of more than two years during which time parents, pupils, and neighboring boards are uncertain whether the new high school will receive recognition and classification. It would simplify the situation very much if a law were passed requiring a district about to organize a new high school, to make an application to the Department, setting forth the circumstances which justify their effort to add a new school to the number. This statement should include the number of schools and pupils in the district, the number qualified to enter upon high school work, the accessibility of already established high schools, and any other pertinent facts; then it should receive the approval of the county superintendent and be forwarded to the Department of Public Instruction for action. If favorable action is taken, then the board making application should receive a permit to organize the school and a statement relieving them of liability for high school tuition in other districts for the years of the course offered in their school.

This plan would afford the inspectors a chance to make suggestions at the right time, when they will do the most good, and would avoid the unpleasant features connected with vetoing abortive efforts undertaken in good faith and at considerable expense both to the district and to the victims—the pupils in such schools. Undoubtedly it would have been better if some schools had never been organized, and with the knowledge of the State and local conditions now at the command of the Department, such errors ought to be avoided in the future.

It is an old truism, "As is the teacher, so the school." And it applies in the high school as much as anywhere else. Pennsylvania is suffering from a lack of competent high school teachers. The law specifying the requirements of such teachers has placed a heavy burden upon the schools employing but one teacher, and it has led to studied evasion in many instances. Any system of certification that does not require equal or higher qualifications in the examiner than it bestows in the certificate is likely to fail when applied by sixty-six different officials under the variety of circumstances that may arise. These men have doubtless done their best to perform a more or less unpleasant duty, but it seems to me that they would be glad to join in a movement to centralize this authority to grant certificates in secondary subjects in a competent state high school board. I believe that it would be a sufficient safeguard to require that no teacher may teach any subject not upon his certificate, provided that the certificate is properly granted. It certainly is hazardous, to say the least, for normal graduates without experience to become the sole teachers in third grade schools. With all due respect to the new Normal course, which is good so far as it goes, I believe that two courses would mark a greater improvement. One course certainly cannot prepare its students for all grades of work from the primary to the first grade high school. Inasmuch as our high schools must employ a large number of normal graduates, why should not the normal students be allowed to select professional studies, at least, that would include secondary school work and its problems if they expect to apply for high school positions?

No discussion of existing imperfections

could be complete without referring to the inadequate training of a majority of our teachers in the grades, especially in the rural schools. This is pertinent to my subject because the high school in our state is forced to struggle with children who have not been able to receive the elements of an education at the hands of their instructors through the eight years in the grades. I have recently observed high school pupils who did not realize that a simple sentence requires some punctuation mark to close it properly, and others who believe that the first word in a Latin sentence is the subject, regardless of the part of speech or office in the sentence. When such things occur in districts employing $40 teachers with provisional certificates many of whom may be untrained and immature high school graduates from third-grade schools, is it not absolutely imperative to demand from the house-tops that the law shall require at least one year of professional work before a provisional certificate is granted, and then to provide the means of making the law effective?

At the risk of being pronounced an educational heretic, I wish to call attention to the inherent weakness and insufficiency of the third-grade schools. I was impressed with the policy of Co. Supt. Stewart, of Greene county, who would not encourage the organization of any high school until the Board agreed to meet the requiremeints of a second-grade school. As a result next year they will have in Greene county seven or eight second-grade schools with two teachers and a proper course and suitable equipment where they might have been content to stop with third-grade schools. If such a policy is practicable in such a rural county as Greene, I believe it would succeed all over the state. As a finality I believe the third-grade schools are a failure, and that it would be a fortunate law that would recognize only first and second-grade schools. A few weaknesses that exist in third-grade schools are poor teachers, low salaries, few students, meagre equipment, combination with eight-grade, forcing from 15 to 24 daily recitations for one teacher, making the recitations very short, and the graduation with diplomas of 15 or 16-year old pupils.

Happily the new code provides for the liability of a school-board for the tuition of its pupils until they finish a four-year course, whether the board maintains a third-grade school or not, and the effect of this legislation will be far-reaching in its tendency to solve this problem of the third-grade school.

High school inspection has had a stimulating effect all along the line, and it is especially notable with regard to the improvement of physical conditions. New buildings are being planned or constructed all over the state. Unannounced yet ever-expected visitation has had its influence upon the teachers and teaching. Our observation and experience causes me to urge that if the principle of inspection is now established its field and scope should be extended, so that every school or institution receiving state appropriation should be visited. The common schools would be benefited by such an extension and the schools and the Department would be more closely related by such a policy. It has been difficult for two men to do the work that ought to be done. Frequent visits are necessary in order to keep in touch with the changes that are occurring. No inspection is adequate that does not communicate its results and recommendations to the board and teacher. At present this is impossible when a growing correspondence must be handled without the aid of a stenographer. The fatigue occasioned by a week of visitation necessarily reduces the length and number of letters that may be written on Saturdays.

Even if three inspectors were at work as provided by the new code it would be impossible to visit all the high schools every year. I believe therefore that a clerk could be added to the force of high school inspectors with great advantage to the service rendered. The handling of reports, the compilation of statistics, and the preparation of the record of non-resident tuition, and many other duties of a similar nature could be done very well by such help.

The suggestions included in this paper are not made in the spirit of criticism, but with a realization of the fact that the school year 1910–11 is full of legislative opportunity. If we as a body are not satisfied with existing laws, let us continue to use our influence with the purpose that conditions may be improved.

Prof. Walter L. Philips, principal of the Lansdowne High School, followed with the last paper of the sessions.

IMPERFECTIONS IN OUR HIGH SCHOOL LEGISLATION.

Your attention has been directed to the imperfection in financial legislation relative to High Schools in this great Commonwealth. I have no hesitancy in concurring in the opinion that the State should appropriate more money for high school purposes, for the high school problem is a factor in the educational product of the State that is to be reckoned with. There are 486 high schools of the third class, 214 of the second, and 127 of the first, 827 in all, in the state of Pennsylvania. 2522 teachers are employed in these schools and 63,000 pupils, approximately, are attending them. That high school education is expensive needs no proof. The wonder is, how much more expensive it will soon become if it is to assume many more of the functions of what we are accustomed to call a home. School boards are raising their hands in horror at the new departments which they are called upon to install and maintain, but the home seems perfectly willing to surrender prerogatives which it guarded jealously and maintained proudly in the days of our fathers and mothers. We find kitchens and dining rooms in our schools now; music and sewing rooms; libraries,—and there are rumors that we shall have to maintain nurseries. Wood and metal working shops must be equipped and maintained, laboratories, gymnasia, business offices and editorial rooms, gardens and truck patches, and lastly, a restaurant where children may partake of warm lunches, thus further relieving the home of their presence and the care of them during the noon recess. (Of course the teachers are delighted to have the children the entire noon recess.) A doctor, a dentist, and a nurse must be employed in addition to a

teacher of games, one of music, and incidentally an athletic coach. There really seems to be nothing left for the home to do but to complain when the teacher represses the child.

For all of this modern high school work, the Commonwealth makes a special appropriation and will pay, when it has the money, to borough high schools the munificent sum of two dollars per year per pupil, to city high schools, nothing in the way of special appropriation. The general appropriation added to this gives approximately $7.00 per year for each pupil receiving this training. What do high schools give to the state? An army in training of 63,000 young people, most of whom do not remain in the district which is primarily responsible for their education, but who, by virtue of their training, go out into the state and nation to apply their training. Those who graduate are found in normal schools, colleges, universities, and in positions of responsibility. 70 per cent. of the students at Harvard are high school graduates.

I have no protest to offer against the appropriation to students in normal schools. Would that the state could own them and give the board as well as the tuition to those fitting themselves to conduct our elementary schools! While the high school pupil receives from the state $7.00 per year, approximately, the normal school pupil receives $60 and many of these students return to their native states other than Pennsylvania, after graduating, giving no service or conscience money to the state that provided free tuition for them. Certainly Pennsylvania, has not met the responsibility it should assume in fostering these higher schools of the people. Money for teachers' salaries as well as for material equipment is needed for these higher schools. $800 to $1000 a year are paid to teachers hired to train children accustomed to the luxuries of homes where there is an income in some instances, of $5,000 to $10,000 a year; the consequence is the teacher is looked upon as a sort of servant or governess to be endured rather than to be respected, honored, and followed with the spirit of discipleship which characterizes schools of some of the European countries where teachers of secondary schools are paid salaries commensurate with their current needs, and are pensioned when they are retired.

Existing high school legislation fails to give proper recognition to high schools in distinction from elementary schools. The State Edutional Department has no bureau of high schools, no place in the Annual Report of the Superintendent of Public Instruction for records concerning them. Statistics concerning them seem to be unavailable at Harrisburg. The Manual for Borough and Township High Schools and the List of High Schools with their Principals, prepared by the State Department are most valuable, but they are too meager. Pennsylvania, ranking second in the number of high schools and of high school teachers, should recognize the importance of these educational fortresses with their regiments of officers and pupils, and should be able to give a full account of them in every respect. We who are so vitally interested in high schools must consult the report of United States Commissioner Brown to learn of the number of men and women teachers in Pennsylvania high schools; the number of boys and girls in attendance; the number in academic courses; the number preparing for colleges and universities; the number graduating each year, their aims other than attendance at higher institutions; the number of teachers to a school, the number of pupils to a teacher, etc. With an educational problem of such magnitude as that of secondary schools, there should be legislation providing for a commission to investigate thoroughly the status of these schools, to collect and classify data concerning them, and providing further for a bureau of high schools as an adjunct to the State Department of Education. Legislation providing for such boards has been enacted in Massachusetts, New Jersey, Rhode Island, Indiana, Minnesota, Virginia, South Carolina, North Dakota, Washington, Louisiana, and Arizona. In New York, this function is vested in the Board of Regents.

The functions of such a Board in Pennsylvania should be of wide scope. It should provide ample supervision, better grading of high schools, closer inspection of qualifications of teachers of secondary schools, more uniformity in units of work accomplished, and higher standards in teaching. It should establish closer relations between high schools and normal schools and colleges. Such a high school board should be given power to thoroughly organize the potential energy of these powerful institutions into the greatest army for civic righteousness and efficiency known to any state or country. Such a board should bring about the proper recognition of these schools as a dominant factor in the educational product of the state.

Legislation concerning the certification of teachers in high schools needs revision. Article 112 of the school laws of 1909 states that directors shall employ for a high school at least one teacher legally certified to teach bookkeeping, civics, general history, algebra, geometry, trigonometry including plane surveying, rhetoric, English literature, Latin including Caesar, Cicero, Virgil, and the elements of physics, chemistry, including chemistry of soils, botany, geology, and zoology including entomology, and no teacher shall be employed to teach any branch or branches of learning other than those enumerated in his or her certificate. I wonder how many high school principals or teachers could satisfy the provisions of this law if examinations were given before a certificate is granted. You know the practices relative to examining candidates for high school positions and certificating them. The examination bears little or no relation either to the candidate's knowledge of the subjects he is to teach or of his competency to teach the subjects. I have known many cases in which school boards have elected applicants to high school positions and superintendents have granted certificates without even giving examinations to test competency. This state of affairs is not calculated to elevate professional standards. The scholarship of the average high school teacher, especially a teacher of a first grade high school, is at least on a par with that of the average

teacher of a normal or preparatory school and of many tutors and instructors in colleges, yet it is to be noted that the state does not require licensing of teachers in these institutions which, in many cases, train our high school teachers. If it is necessary to examine and license high school teachers, why not teachers of other secondary and higher schools? Why should not the state license teachers of all institutions calling themselves schools and attempting to train the minds of the state's most valuable resources, as physicians, lawyers, and druggists are licensed before they are allowed to practice. In too many so-called schools the minds of children are merely tampered with by unskilled, unprofessional, and unlicensed teachers. False standards are set; parents and young folks are often deceived by marks, diplomas, social stunts, snobbery, and uniforms. Catering to the pleasures and whims of parents does not contribute towards real education any more than quackery in medicine by unlicensed doctors is contributing to the health conditions of the state. If we argue that superintendents and local school boards are competent to judge of the qualifications of teachers and to protect the schools from incompetency in the teaching force, we are making out a pretty strong case against licensing high school teachers at all. Licensing high school teachers is a function which should be vested in a high school board.

Another imperfection in school legislation is lack of provision for the training of secondary school teachers. In a great majority of the states there are laws requiring certification of competency to teach, but the spirit of the law is ignored in the case of secondary school teachers. Failure of the law to properly differentiate the high school problem from that of the grade school is doubtless accountable for this condition. The Northern Central Association of Colleges and Secondary Schools has undertaken to define the qualifications required of teachers of secondary schools. The Committee of Seventeen of the N.E.A., proceedings of 1907, has done important work in this line, also. State High School Boards have tried to remedy defects in qualifications by issuing certificates upon examination in a manner somewhat similar to that in which Pennsylvania issues permanent certificates. Examination tests cannot be taken as an equivalent for a proper system of training. Examinations can be successfully passed by cramming. Factors of personality which attract youth, knowledge of adolescents and skill in dealing with them, and knowledge of the activities of the community by real contact with them cannot be crammed for examinations, but the competent high school teacher must possess them. In your experience, what per cent. of high school teachers are really qualified for their work when they undertake it? Every one of you who know high schools, knows of many failures of your teachers to measure up to a successful standard until after much loss has occurred to the school.

A discussion of the attempts of colleges, universities, and normal schools to provide the training of high school teachers need not enter here. I do not believe that any will honestly claim that they succeed. All agree that higher scholarship must be combined with professional training. All concede that the university can give the training in higher scholarship, and that the better normal schools can give the professional training, and that neither can give the practice teaching in model schools in which conditions are anything like those of a real high school with what the pupils call freshmen, sophomores, etc.

In Pennsylvania the university graduate will not go to the normal school for professional training, and the great majority of normal school graduates do not get university training until they start their high school teaching, hence the secondary schools must select teachers from a list of imperfectly trained applicants. Nowhere in the country is there a college or university giving professional training for high school teaching such as normal schools are giving for elementary teaching. Does the state refrain from establishing such a college of education because several colleges, universities and normal schools maintain pedagogical departments and believe that they are training men and women for successful high school teaching?

Legislation concerning County Teachers' Institutes has become a blue law, yet we have a pageant, annually, just after we get our schools into nice running order celebrating the pioneer days when the institute was the only source of inspiration, professional advancement, and social function for teachers of elementary schools. Have you considered the cost of these annual emotional demonstrations? For the 34,700 teachers, school boards pay $347,000; county commissioners pay approximately $13,400; and teachers themselves approximately $43,482; total $403,882. Is this money well spent in these days of normal schools, summer schools, chautauquas, and other professional meetings? The money it costs to send high school teachers to institutes certainly is not well spent. Why not spend this money to send high school teachers to associations of teachers of English, science, mathematics, or such meetings as this meeting of high school teachers? The existing laws not drawing a line of demarcation between high schools and elementary schools, school boards are not allowed to excuse high school teachers from attendance at institutes, nor are they allowed to substitute attendance at gatherings such as this. Many school boards evade the law, and allow their high school teachers to visit schools The visiting is generally profitable both to the teacher and her department of the school.

As to imperfections in high school legislation time will permit reference only to the following:

State legislation concerning fraternities and sororities, so that local boards and principals may have legal backing to control this parasite upon a democratic institution.

Legislation providing for sending high school teachers to summer professional schools, to investigate the management of similar departments in other districts, cities, or countries.

Legislation providing for the arrest, detention, and imprisonment of civil officers who pay absolutely no attention to the provisions

of the law regarding the sale of tobacco to minors and the frequenting of pool rooms.

Legislation providing for the retirement of high school teachers with pensions.

Legislation requiring an equal number of men and women teachers in a co-educational high school, requiring a minimum attendance of 50, and not allowing an attendance of more than 400.

Legislation giving every boy and girl who has successfully completed the 8th grade work, an opportunity to receive a first grade high school education;

Legislation providing for elective courses, vocational training, an inspector for every 50 high schools.

Let us not be unmindful of the valuable legislation which has been enacted recently concerning high schools. Special appropriations have been made; joint establishment of high schools has been encouraged; weak high schools which were nothing more than grammar schools with a year or so of post-grammar school work have been discouraged; districts unable to maintain high schools have been assisted in the payment of the tuition of their children in a neighboring high school.

Legislation making high school education largely a function of the state as a unit instead of the district.

MORE HIGH SCHOOL INSPECTORS NEEDED.

State Supt. Nathan C. Schaeffer made a brief address in which he emphasized the need of at least three Inspectors for the High Schools, and a fourth for the inspection of secondary schools that are not high schools. He urged also the importance of maintaining the standard of at least three teachers for a first-grade four-years-course high school. Efforts will be made to modify this so as to provide that two teachers be made the standard. It will be for the High School teachers to stand together to prevent this. One man with a vote counts for more here than many good teachers who have no votes.

Prof. B. G. Graham reported from the mathematical and science section of the high school department that his committee will discuss with the President plans for next year, and will arrange a program for the section at the next meeting of the department. The committee is as follows: Miss Jane Matthews, Allegheny; B. G. Graham, Pittsburgh; George Winchester, Washington and Jefferson College; Robert Anderson, West Chester Normal School; and L. J. Ulmer, Williamsport.

COLLEGE ENTRANCE REQUIREMENTS.

President Davis announced that the committee on College Entrance Requirements, which has been more or less inactive of late, will map out a plan of work this year. It has been intended to have a committee of five, two of whom have already been named, Charles C. Heyl, West Philadelphia High School, and William I. Smith, Allegheny high school. The president of the department and chairman of the executive committee, who will be the retiring president, will be ex-officio members and the fifth should be chosen from among the colleges. On motion of Mr. Rynearson, it was ordered that this should be done. In the absence of Mr. Heyl, the report of the committee was read by Mr. Smith as follows:

Your committee on College Entrance Requirements begs to present the following report, as the result of a broad consideration of the material presented in the addresses delivered at the Round Table conference on College Entrance Requirements that formed a vital part of the program of the sixth annual convention of the department. The conference was exceedingly illuminating. Although the question under discussion is by no means a novel one, it comes to the attention of educators in this state with particular force at the present time, on account of the recent striking development of vocational work in our modern high schools. We beg to refer with emphasis to the report made in 1892 by the Committee of Ten appointed by the National Educational Association to investigate this question. That report still stands as the broadest satement of the problem and its solution that has yet been made. In brief, its finding was to the effect that the colleges should adapt their entrance requirements to the work of the secondary schools after these schools had been put upon a sound educational basis.

It has been the aim of every modern secondary school to rank as educationally sound. The development of these schools in Pennsylvania, however, has been far from uniform. Owing to the lack of broad professional supervision of our growing secondary schools, marked individuality among them has been developed. Unity in the system has not been a striking feature. Now therefore, we find ourselves offering to the public and proffering to the colleges for their acceptance an overwhelming variety in our secondary school curricula. When the colleges endeavor to unify their standards of admission they are presented with nothing definite and universal in the way of preparatory courses in the public secondary schools. An arbitrary standard is therefore established by the colleges based upon conditions that do not obtain in many of these modern secondary schools. What the colleges demand frequently proves to be a great hardship upon the secondary school, if not altogether an impossibility.

Probably every secondary school in our Commonwealth is now educationally sound. But much greater unity among these schools is needed if the system is to demand its proper recognition by the colleges. Broadened professional supervision of the high schools in our state, is an urgent necessity at this time. Your committee therefore deems the time propitious for the adoption of the following resolution:

Resolved, that it is the sense of the High School Department of the Pennsylvania State Educational Association, that the State Superintendent of Public Instruction, and the City Superintendents in the state, be requested to

take steps looking toward the simplification and unification of the high school curricula in the state, to the end that the efficiency of the high schools may be increased, and that they may be placed upon a unified and sound modern educational basis throughout the state. And be it further

Resolved, that this Association endorses the recommendation of the Committee of Ten on College Entrance Requirements, appointed by the National Educational Association, to the effect that the colleges should adapt their entrance requirements to the work of the secondary schools upon a sound educational basis.

REPORT OF AUDITING COMMITTEE.

The report of the auditing committee was presented by the chairman, Mr. J. P. Breidinger, and on motion approved, as follows:

Statement of the Treasurer of the High School Department:

Received for enrollment fees	$300.00
EXPENSES.	
Paid Wm. McAndrew, as per receipt..	$ 30.00
Paid President Davis for expenses as per statement	58.96
Paid hotel expenses of Prof. McAndrew	2.75
	$ 91.71
Cash on haind to be turned over to Treasurer Keck	$208.29
Dec. 28, 1910.	$300.00

We have examined above statement as above, and find it to be correct.

Signed: J. P. Breidinger, M. Alton Richards, John S. Hosterman.

OFFICERS FOR NEXT YEAR.

Mr. P. M. Bullard from the committee on nominations reported the following as officers for next year. The Secretary was, on motion, directed to cast the ballot and they were duly elected.

President, A. H. Welles, Scranton.
Vice President, A. E. Kraybill, Johnstown.
Secretary, J. F. Adams, Millersburg.
Treasurer, W. W. Wright, Uniontown.
Executive Committee, Charles S. Davis, retiring president, Steelton; Edward Rynearson, Pittsburg; Martha C. Thatcher, Williamsport; C. B. Pennypacker, York.
Educational Council, J. E. Baker, Philadelphia, three years; George D. Roberts, Altoona, two years, and W. S. Steele, Harrisburg, one
Nominating Committee, J. P. Breidinger, Wilkes-Barre.

RESOLUTIONS.

The report of the Committee on Resolutions was presented by Mr. G. D. Robb as follows:

Mr. Chairman: Your committee on Resolutions begs leave to present the following:

The fundamental problem of the public high school is to meet the needs of the great mass of pupils to whom it affords the only opportunity of advanced education. The solution of this problem has been greatly hindered by college entrance requirements, for the following reasons:

The ninety per cent. of our pupils who never attend colleges as well as the great number who do not enter the high school because of its restricted course, need a broad cultural acquaintance with their race inheritance and an interpretation of its relation to their own lives. They also need some vocational training. This may be as truly cultural as the traditional studies.

Much effort is wasted in schools because the various colleges place widely different interpretations on the definition of the same unit—many of them exacting unreasonable allotments of time to certain subjects. The energies of even the large city schools are thus almost wholly absorbed in teaching these required subjects in the traditional way, with the result that advanced educational opportunity is practically denied to the large class that needs it most.

Largely as a result of college entrance exactions our courses of study are so narrow and uninviting that many boys and girls find therein another reason for not entering the high school. And of those who do enter many discover that their needs and aims are not being met, and so drop out of school during the first two years with the result that our high schools are coming far short of their largest possible social service.

In view of these facts be it therefore Resolved

1. That it is the mission of the Public High School to furnish equal opportunities for broad culture and equal preparation for efficient service alike to all pupils.

2. That colleges and public high schools should agree upon a uniform rational standard for admission to a course in Liberal Arts and also to courses in Technical Schools.

3. That the written statement of the principal of a reputable first-class high school, certifying that the pupil has completed a four-year course of study and has, in his opinion, the ability to do freshman work creditably, is the only qualification that should be required of an applicant for admission to college.

4. That we recognize the necessity of an elementary science course in high schools, which will be practical and at the same time a help to those who pursue the technical sciences. Such a course should take a broad view of the subject emphasizing the interesting side of the particular science rather than dwelling upon its more intricate phases. Laboratory work should accompany the above, thus developing the pupil's power of doing individual research work.

5. That a better understanding be brought about between the college entrance boards and the high schools of Pennsylvania in the matter of English requirements, to the end that our high school courses in English be relieved of much of the critical analysis of the prescribed content and of those classics poorly adapted to pupils of high school age, and that training for culture and power of expression be the end for which we shall strive.

6. That more attention be given to vocational training as adapted to local industries and that colleges of liberal arts give more recognition to such work as equivalents for entrance.

7. That $1,000,000 be appropriated for Pennsylvania High Schools for two years, instead of $550,000 as at present; that the additional appropriation be an increased appropriation and not to be taken from the elementary schools; and that a certain percentage of the said appropriation be expended for such equipment as the High School Inspectors deem wise.

8. That the Department of Public Instruction be authorized by law to issue permits to school boards desiring to organize new high schools.

9. That the number of High School Inspectors be increased.

10. That we express our appreciation of the capable manner in which the officers and executive committee have arranged for and carried on the sessions of this convention.

11. That we extend our thanks to Mr. W. E. Rambo, Superintendent of Grounds and Buildings, for the use of the Capital Building.

The report of the committee was adopted as read. President Davis called the newly-elected President to the chair, who thanked the Department for the honor conferred, and said he should think his work well done if, at the end of the year, he could make as good a showing as the retiring President had done during the year now closed.

The Department then adjourned.

The committees as named on page 356, January number, were not complete. The members of the Legislative Committee are Supt. L. E. McGinnes, Steelton, Chairman, J. George Becht, Clarion, W. S. Steele, Harrisburg, Holman White, Philadelphia, and Chancellor Samuel B. McCormick, Pittsburg. The committee on Necrology is Supt. J. F. Adams, Millersburg, Chairman, Herbert S. Putnam, Towanda, R. E. Laramy, Phœnixville, Margaret McGuire, Philadelphia and Joseph B. Gabrio, Hazelton.

MEMBERS STATE ASSOCIATION.

ADAMS—24.

H. Milton Roth,* Gettysburg.
Mary D. Hoechst,[1] East Berlin.
Mame C. Adams,[2] Gettysburg.
William P. Baker,[1] Abbottstown.
Mary E. Benner,[1] Gettysburg.
Carrie E. Miller,[1] Gettysburg.
Anna H. Major,[1] Gettysburg.
Elizabeth B. Rummel,[1] Gettysburg.
Rosa E. Scott,[1] Gettysburg.
Anna M. Hoke,[1] Gettysburg.
Charles A. Landis,[3] Fairfield.
Helen L. Cope,[1] Gettysburg.
W. A. Burgoon,[4] Gettysburg.
Ruth Hamilton,[1] Gettysburg.
Hattie B. McGrew,[1] Gettysburg.
Mary E. Wible,[1] Gettysburg.
Katie K. Witherow,[1] Gettysburg.
L. D. Crunkleton,[4] Littlestown.
Rachel M. Scott,[1] Gettysburg.
Virginia Beard,[1] Gettysburg.
R. Alice Longsdorf,[1] Biglerville.
Charlotte M. Walhay,[1] Aspers.
B. Carrigan,[1] McSherrystown.
Roy D. Knouse,[2] Abbottstown.

ALLEGHENY—75.

Samuel Hamilton,* Braddock.
John Morrow,* Allegheny, Box 177.
Samuel Andrews,* Pittsburgh.
James L. Allison,* Wilkinsburg.
Grant Norris,* Braddock.
F. H. Powers,* McKees Rocks.
H. W. Goodwin,[3] Turtle Creek.
Charles S. Banker, Pittsburgh.
Pittsburgh Teachers' Association.‡
John A. Hollinger,[4] Pittsburgh.
W. S. Bryan,[3] Carnegie.
Edward Maguire,[4] Swissvale.
H. E. Winner,[3] Pittsburgh.
Margaret A. Spencer,[1] Pittsburgh.
Lida J. Henderson,[1] Pittsburgh.
Mary E. McCall,[1] Pittsburgh.
Louisa D. Seif,[1] Pittsburgh.
E. H. Knoch,[4] Clairton.
W. E. Borger,[4] Sewickley.
Harry M. Shafer,[1] Pittsburgh.
J. L. Spitler,[4] Braddock.
S. B. McCormick,[1] Pittsburgh.
W. E. Albig,[4] Bellevue.
H. W. Golden,[4] N. Side, Pittsburgh.
M. E. Van Wagonen,[4] Pittsburgh.
Jessica Childs,[1] Pittsburgh.
G. W. Gerwig, Sec'y, Allegheny.
Raymond W. Lies,[1] Pittsburgh.
C. B. Connelly,[3] Pittsburgh.
S. B. Linhart, Sec'y, Pittsburgh.
Kathrine F. Reed,[2] Pittsburgh.
Clarissa A. Moffitt,[1] Pittsburgh.
Harry M. Ferren,[2] Allegheny.
Christine Alberti,[2] Allegheny.
W. G. Chambers,[4] Pittsburgh.
C. R. Dooley,[1] Pittsburgh.
Training School, Pittsburgh.
David S. Sweeney, Pittsburgh.
W. C. Graham,[3] Wilkinsburg.
G. E. Mark,[3] Sewickley.
O. S. Jamison,[4] Elizabeth.
J. F. Bower,[3] McKeesport.
J. B. Richey,* McKeesport.
Jane Matthews,[2] Allegheny.
Mary P. Lang,[2] Allegheny.
C. A. Medlock,[2] Allegheny.
Irene F. Donahey,[2] Allegheny.
Louisa Hazlett,[2] Allegheny.
William Breitweiser,[2] Allegheny.
Helen Livingstone,[2] Allegheny.
Katherine J. Mechling,[2] Allegheny.
F. T. McClure,[2] Allegheny.
Hugh L. Porter,[2] Allegheny.
Mary P. Boss,[2] Allegheny.
Jane Pugh,[2] Allegheny.
E. Pearl Howe,[2] Allegheny.
Vernon S. Beachley,[2] Allegheny.
S. M. Kanagy,[2] Wilkinsburgh.
F. L. Horner,[1] Pittsburgh.
Edward Rynearson,[4] Pittsburgh.
Ben. G. Graham,[2] Crafton.
E. F. Loucks,[2] Braddock.
William L. Smith,[3] Allegheny.
F. G. Masters,[2] Pittsburgh.
Adda Martin,[2] Avalon, Allegheny.
Byron E. Rupert,[2] East Pittsburgh.
F. C. Florey,[3] Aspinwall.
W. P. Henning,[2] Allegheny.
Irene E. McDermott,[2] Allegheny.
John Thompson,[1] Pittsburgh.
Effie McMillan,[2] Allegheny.
George W. Walker,[2] Allegheny.
John K. Musgrave,[2] Allegheny.
Elizabeth A. McCreery,[2] Allegheny.
Francis J. Laroe,[2] Allegheny.

ARMSTRONG—2.

W. A. Patton,* Kittanning.
M. A. Milliron, Kittanning.

BEAVER—2.

Clyde C. Green,* New Brighton.
Andrew Lester,* Beaver Falls.

BEDFORD—1.

J. K. Grim,[3] Mann's Choice.

BERKS—69.

Eli M. Rapp,* ‡ Reading.
Charles S. Foos.* ‡ Reading.
A. C. Rothermel,[6] Kutztown.
Charles C. Boyer,[6] Kutztown.
W. W. Deatrick,[6] Kutztown.
David S. Keck,[6] ‡ Kutztown.
Lillian E. Johnson,[6] Kutztown.
James S. Grim,[6] Kutztown.
Clara A. Myers,[6] Kutztown.
Helen Arnold Beam,[6] Kutztown.
Jeremiah M. Hoffman,‡ Reading.
Meta Orff,[1] Reading.
B. F. Leinbach,[1] West Leesport.
Edith E. Kistler,[1] Stony Run.
Otis S. Rothenberger,[1] Leesport.
D. Fred. Aungst,[4] Birdsboro.
Martha McCallum,[1] Wernersville.
Maggie Sanders,[1] Kutztown.
Laura Hepner,[1] Kutztown.
Kate DeTurk,[1] Esterly.
William A. Stricker,[3] Wernersville.
Francis W. Balthaser, Fleetwood.
Mary Linderman,[1] Scarlett's Mill.
Lulu Helman,[1] Reading.
Stella G. Moyer,[1] Robesonia.
A. A. Kilmer,[1] Stouchsburg.
Cora A. Richards,[1] Maxatawny.
Edna A. Gruber,[1] Bernville.
Nora E. Swoyer,[1] Sinking Spring.
Clara J. Kissinger,[1] Reading.
Mary S. Addams,[4] Reading.
Amanda E. Stout,[4] Reading.
Araminta B. Richards,[4] Reading.
Jessie F. Hughes,[1] Reading.
Nettie V. Hughes,[1] Reading.
Martha Goodenough,[1] Reading.
Franklin G. Dietrich,[2] Reading.
George M. Jones,[2] Reading.
Loretta C. Reiley,[1] Reading.
Almira J. Wobensmith,[1] Reading.
Lillie V. Schoener,[4] Reading.
Blanche Maguire,[1] Reading.
George W. Dauth,[1] Reading.
Sallie C. Morris,[1] Reading.

* Superintendent. ‡ Life member. [1] Teacher. [2] H. S. Teacher. [3] Principal. [4] Supervisor. [5] Inspector. [6] Normal School.

Prof. David S. Keck, Treasurer, sends (March 8th) the list of members enrolled. The financial account for this meeting now shows 12 Life Membership fees, $120; 1801 members, 33 of whom are life members, $1768—making a total of $1888. Thirty-two bills paid to date amount to $1419.87.

K. Laura Mengel,[1] Reading.
Charles C. Obold,[3] Reading.
John S. McCurdy,[3] Mohnton.
Harry D. Worley,[1] Mohnton.
S. W. Kerr,[2] Reading.
Samuel I. Henry,[2] Boyertown.
H. C. Snyder,[3] West Leesport.
Harvey R. Vanderslice,[4] Boyertown.
H. Harold Kershner,[3] Reading.
B. H. Weidman,[3] Sinking Spring.
M. E. Krick-Miller,[1] Sinking Sp'g.
Amanda Wicklein,[1] Birdsboro, R. 1.
Daniel W. Clauser,[1] Birdsboro, R. 1.
Elmer D. Baver, Reading, R. D. 2.
Elizabeth Seamon,[1] Leesport.
Alice Rothenberger,[1] Leesport.
Robert Bucks,[1] Leesport.
Clara Schaeffer,[1] Leesport.
Katie E. Glasmire,[1] Leesport.,
James F. Long,[1] Mertztown.
A. F. Kemp,[3] Mertztown.
Carrie Bauer,[1] Mertztown.
Mrs. Sabina Hilbert,[1] Mertztown.
Jacob F. Long,[1] Mertztown.
H. A. Heckman,[3] Shoemakersville.

BLAIR—37.

T. S. Davis,* ‡ Altoona.
H. S. Fleck,* Tyrone.
George D. Robb,[3] Altoona.
P. Kreuzpointner,[2] Altoona.
Lina Reese,[1] Tyrone.
I. E. Holsinger,[3] Tyrone.
E. E. Houck, Tyrone.
D. M. Lotz,[1] Duncansville.
A. K. Smith,[4] Altoona.
M. B. Wineland,[1] Juniata.
J. L. Noll,[1] Altoona.
Harry K. Beachman,[1] Altoona.
Roland O. Lytle,[3] Arch Spring.
Dora Black,[1] Eldorado.
Mabel M. Wylie,[1] Hollidaysburg.
J. L. Zerbe,[3] Tyrone.
Myrtle R. Mountz,[1] Duncansville.
C. O. Berry,[3] Tyrone.
Margaret Crissman,[1] Elberta.
Ella M. Snoberger,[1] Curryville.
Mary Kephart,[1] Duncansville.
W. M. Logue,[3] Altoona.
June Mountz,[1] Williamsburg.
E. S. Rice,[4] Hollidaysburg.
Barbara Martin,[1] Tyrone.
J. R. Bell,[2] Tyrone.
Mrs. Ida P. Smith,[1] Tyrone.
Jane R. Brenneske,[2] Altoona.
A. Brown Miller,[2] Altoona.
Mary E. Clarkson,[2] Altoona.
Linda Hooper,[2] Altoona.
George B. Williams,[2] Altoona.
Mary V. Turner,[2] Altoona.
J. A. Stewart,[2] Altoona.
Jessie McFarland,[2] Altoona.
A. M. Longenecker,[2] Altoona.
E. Marie Lentz,[2] Altoona.

BRADFORD—7.

Herbert S. Putnam,* Towanda.
Helen Wright,[1] Canton.
George E. Rogers,[4] Athens.
L. E. DeLaney,[4] Sayre.
L. J. Russell,[2] Towanda.
William M. Denison,[4] Troy.
J. H. Humphries,[4] Towanda.

BUCKS—51.

J. H. Hoffman,* Doylestown.
Louise D. Baggs,* Bristol.
Mary Arbogast,[1] Langhorne.
Cora Fuller,[3] Buckingham.
Edna H. Lear,[1] Lahaska.
Mary A. Johnson,[1] Lahaska.
Edith S. Clayton,[1] Pineville.
Bertha Gilmore,[1] Buckingham.
Ella P. Jamison,[1] Wycombe.
Bartie Miller,[1] Doylestown.
Lida W. Fell,[1] Doylestown.
Josephine J. Carver, Mozart.
Rachel Miller,[1] Carversville.
Daniel G. Hartney,[1] Langhorne.
Rebecca E. Duffield,[1] Langhorne.
Rebecca L. Knight,[1] Langhorne.
Thomas Morgans,[3] New Hope.
Margaret Shaffer,[1] New Hope.
Anna C. Kelley,[1] New Hope.
Anna H. Whiteley,[1] New Hope.
H. Clinton Neagley,[3] Fallsington.
Mary P. Carter,[1] Morrisville, R. 1.
Sallie H. Musser,[1] Morrisville, R. 1.
Leah F. Slotter,[1] Mechanicsville.
Gertrude Finney,[1] Fallsington.
S. S. Shearer,[3] Yardley.
Nellie R. Holland,[1] Lahaska.
Belle Scott,[1] Eddington.
Elizabeth Endicott,[1] Hulmeville.
S. M. Smyser,[3] Morrisville.
M. Emma Beidler,[1] Plumsteadville.
Lily A. Weirbach,[1] Doylestown.
Leidy Allem,[1] Wismer.
Maggie M. Nice,[1] Danboro.
Gertrude Haldeman,[1] Danboro.
Lizzie Worman,[1] Point Pleasant.
Lillian M. Bullock,[2] Jamison.
Elizabeth Wiley,[1] Doylestown.
Elizabeth H. Gallagher,[1] Johnsville.
Sarah J. Broadhurst,[3] Solebury.
A. James Gayman,[3] Doylestown.
Anna C. Cozens,[1] Neshaminy.
Carmon Ross,[4] Doylestown.
Rachel Bartine,[1] Bristol.
Alice Lippincott,[1] Bristol.
Ella Mathias,[1] Bristol.
Effie Watson,[1] Bristol.
W. K. Huff,[1] Sellersville.
E. W. Martindell,[3] Hulmeville.
Albert C. Rutter,[3] Perkasie.
A. L. Eby,[2] Newtown.

BUTLER—3.

Loyal Freeman Hall,[3] Butler.
Emma McElvain,[1] Butler.
H. W. F. Price,[1] Butler.

CAMBRIA—7.

Herman T. Jones,* Ebensburg.
James N. Muir,* Johnstown.
J. E. Hershberger,[4] Conemaugh.
Margaret Regan,[1] Gallitzin.
G. B. Murdoch,[4] Johnstown.
A. E. Kraybill,[3] Johnstown.
Charles H. Meyers,[2] Johnstown.

CAMERON—3.

Mattie M. Collins,* Emporium.
C. E. Plasterer,[4] Emporium.
W. Grier Briner,[1] Emporium.

CARBON—9.

James J. Bevan,* Mauch Chunk.
B. M. Shull,[4] Lehighton.
Elmer E. Kuntz,* Lansford.
W. E. Bevan, Mauch Chunk.
A. E. Wagner,[4] Nesquehoning.
Jane A. Kline,[1] Summit Hill.
H. D. Levengood,[3] Nesquehoning.
C. E. Cole,[4] Palmerton.
Holliday R. Jackson,[3] Mauch Chunk.

CENTRE—10.

David O. Etters,* State College.
Edwin Erle Sparks,‡ State College.
J. P. Welsh,‡ State College.
Jones E. Wagner,[3] Bellefonte.
A. I. Underwood, State College.
B. Y. Myers,[4] Phillipsburg.
Clarence E. Toole,[3] Millheim.
S. E. Weber,[4] State College.
J. P. Jackson,[1] State College.
Rose L. Fauble,[3] Bellefonte.

CHESTER—30.

George W. Moore,* Ercildoun.
Addison L. Jones,* West Chester.
William T. Gordon, Coatesville.
R. E. Laramy,* Phoenixville.
Thomas A. Bock,[4] Spring City.
Irwin M. Sabold,[4] Parkesburg.
Isaac Doughton,[3] Phoenixville.
W. J. Smith,[3] Coatesville.
Mary E. Wingard,[2] Spring City.
S. I. Kreemer,[4] West Chester.
Lena C. Ingram,[1] Avondale.
Ida C. Pyle,[1] Landenberg.
Mary H. Howell,[2] Coatesville.
Anna L. Whitehead,[2] Downingtown.
Lyde W. Polk,[2] Coatesville.
Mrs. A. C. Dean,[1] Coatesville.
George M. Philips,[6] ‡ West Chester.
Ella V. Waitneight,[1] Phoenixville.
Smith Burnham,[6] West Chester.
Mary Davis,[1] Phoenixville.
Anna M. Quidland,[3] Phoenixville.
Mame M. Hall,[3] Phoenixville.
Ida Moore,[1] Phoenixville.
Oren J. Barnes,[3] West Chester.
Margaret B. Morton,[3] Oxford, R. 4.
Emma Cloud,[1] Leonard.
Emma Mackey,[1] Landenberg.
J. Walter Gapp,[2] Phoenixville.
H. D. Wolff,[2] Phoenixville.
Emma K. Bossart,[2] Phoenixville.

CLARION—3.

N. E. Heeter,* Clarion.
Alice McCloskey,[1] North Pine Grove.
J. W. Rutherford,[3] New Bethlehem.

CLEARFIELD—7.

W. E. Tobias,* Clearfield.
J. H. Alleman,* Du Bois.
L. F. Benchoff,[4] Clearfield.
W. W. Jones,[3] Falls Creek, R. D. 1.
John B. Geissinger,[3] Du Bois.
W. W. Eisenhart,[4] Morris'le Mines.
Anna M. Black,[2] Du Bois.

CLINTON—9.

Ira N. McCloskey,* Lock Haven.
Edw. S. Ling,* Lock Haven.
Lilian M. Adams,[1] Lock Haven.
George Park Singer,[6] Lock Haven.
Julia E. McCabe,[1] Lock Haven.
L. A. King,[6] Lock Haven.
Anna Frohlich,[6] Lock Haven.
J. R. Flickinger,[6] Lock Haven.
George A. Mincemoyer,[4] Renovo.

COLUMBIA—17.

W. W. Evans,* Bloomsburg.
D. J. Waller, Jr.,[6] Bloomsburg.
L. T. Orner,[4] Aristes.
Fred W. Diehl,[3] Millville.
Sarah Park,[1] Benton.
D. S. Hartline,[6] Bloomsburg.
Hazel Row,[2] Bloomsburg.
Vida Cope,[1] Berwick.
Laura S. Essick,[3] Stillwater.
Oro Miller,[1] Rohrsburg.
Sarah M. Hagenbuch,[1] Berwick.
W. W. Ridge,[4] Centralia.
L. P. Sterner,[4] Bloomsburg.
James G. Sigman,[4] Berwick.
Geraldine Yost,[1] Benton.
R. M. Creasy,[1] Bloomsburg.
Josephine Pealer,[1] Stillwater.

CRAWFORD—3.

Henry Pease,* Titusville.
R. H. Bellows,* Meadville.
W. D. Lewis,[3] Meadville.

CUMBERLAND—93.

J. Kelso Green,* Carlisle.
John C. Wagner,* Carlisle.
Addie K. Fulton,[1] N. Cumberland.
Jane Nayler,[1] New Cumberland.
E. Virginia Albright,[1] Camp Hill.
Zora M. Gettel,[1] Shippensburg.
Mary E. Wolf,[1] Shippensburg.
Alice Hair,[1] Enola.
Sadie Zarker,[1] Wormleysburg.
George M. Briner,[6] Carlisle.
Maud Z. Keat,[1] Carlisle.
Mayme V. Eppley,[1] Carlisle.
Rose V. McKeehan,[1] Carlisle.
Elizabeth H. Blair,[1] Carlisle.
J. W. Potter,[1] Carlisle.
C. B. Derick,[1] Carlisle.
J. A. Ward,[1] Carlisle.
J. F. Ferguson,[1] Carlisle.
Laura A. Zeigler,[1] Carlisle.
Rebecca G. Armstrong,[1] Carlisle.
H. A. Bucher,[1] Carlisle.
J. C. Zeigler,[1] Carlisle.
J. E. Carothers,[1] Carlisle.
J. L. Weitzel,[1] Carlisle.
Helen Longsdorf,[1] Carlisle.
Florence E. Zeigler,[1] Carlisle.
Miriam F. Lindemood,[1] Carlisle.
A. M. Hollinger,[1] Carlisle.
Isabelle Means,[1] Carlisle.
Nell W. Greason,[1] Carlisle.
Maude B. Ernst,[1] Carlisle.
Emma L. Hannan,[1] Carlisle.
Ella C. Wetzel,[1] Carlisle.
Elda H. Shoemaker,[1] Carlisle.
Bertha E. Aberle,[1] Carlisle.
Rena N. Strock,[1] Carlisle.
Sara F. Stuart,[1] Carlisle.
Mary A. Wert,[1] Carlisle.
James G. Young,[1] Carlisle.
Katie V. Brandt,[1] Carlisle.
S. C. Beitzel,[4] Mechanicsburg.
Edith G. Bowman,[1] Mechanicsburg.
John E. Fenton,[1] Newville.

Grace Hursh,[1] Newville.
Annie Walker,[2] Newville.
Helen Scouller,[1] Newville.
Emma Sours,[1] Mechanicsburg.
J. T. Ruhl,[3] Newville.
John T. Kelley,[1] Newville, R. D. 5.
G. W. Shumberger,[1] Mechanicsburg.
Ralph Jacoby,[1] New Cumberland.
Jane McCachran,[1] Newville.
Bessie Klink,[1] Newville.
Robert W. Peffer,[1] Carlisle.
Mother Mary Poul,[1] Carlisle.
M. M. Metzger,[3] Mount Holly Sp'gs.
John Hetrick,[3] New Kingstown.
H. A. Walter,[1] Camp Hill.
C. H. Gordinier,[6] Shippensburg.
Mary Howe,[1] Mechanicsburg.
H. B. Enck,[1] Mount Holly Springs.
Ida J. Adams,[1] Mechanicsburg.
Alta Lehman,[1] Carlisle.
C. S. Jacobs,[1] Carlisle Springs.
Frances Graham,[1] Newville.
Grace Hemminger,[1] Newville.
M. Zammerman,[1] Mechanicsburg.
A. A. Evans,[1] Carlisle, R. D. 8.
S. P. Schall,[1] Bowmansdale.
W. S. Cornman,[1] Boiling Springs.
W. G. Rice,[3] Camp Hill.
Edgar Bowman,[1] Newville.
A. A. Arnold,[1] Mechanicsburg.
G. A. Berkheimer,[1] Shepherdstown.
Mazie Fulton,[1] Carlisle.
Gertie Nicker,[1] Boiling Springs.
Bertha G. Kitele,[1] Carlisle.
M. E. Felty,[1] Mechanicsburg.
P. L. Beistline,[1] Mechanicsburg.
B. K. Miller,[1] Mechanicsburg.
McClelland Goodhart,[1] Shippensburg.
R. W. Woods, Carlisle.
Reed B. Teitrick, Carlisle.
A. B. Harnish,[1] Mechanicsburg.
Jean McCollough,[1] Newville.
Millie Mitchell,[1] West Fairview.
J. S. Heiges,[6] Shippensburg.
E. P. Brungate,[4] Shippensburg.
C. M. Kast,[2] Mechanicsburg.
H. M. Kast,[1] Mechanicsburg.
E. W. Harvey, Camp Hill.
Nelle Morley,[2] Camp Hill.
W. A. Hutchison,[3] Carlisle.

DAUPHIN—576.

H. V. B. Garver,* Middletown.
F. E. Downes,* Harrisburg.
L. E. McGinnes,* ‡ Steelton.
H. J. Wickey,* Middletown.
A. D. Glenn, Harrisburg.
W. S. Hertzog,[5] Harrisburg.
C. D. Koch,[5] Harrisburg.
R. M. McNeal, Harrisburg.
C. M. Weigle,[3] Highspire.
L. S. Shimmell,[4] Harrisburg.
Charles H. Sleichter,[3] Hummelstown.
Ethel Hendricks,[1] Hummelstown.
Edith Shelley,[1] Steelton.
E. E. Knauss,[1] Middletown.
Ada M. Walter,[1] Hummelstown.
Anna L. Henninger,[1] Berrysburg.
Harry Z. Buffington,[1] Gratz.
Bessie Powell,[1] Williamstown.
Nora E. Gruber,[1] Bachmanville.
C. D. Lengle,[1] Derry Church.
Grace Longabach,[1] Millersburg, R. 2.
E. LeRoy Keen,[1] Wiconisco.
Hilda Houck,[1] Hummelstown.
Robert Hoke,[1] Penbrook.
H. B. Garver,[3] Middletown.
J. B. Brubaker,[1] Middletown, R. 2.
Elizabeth Morgan,[1] Harrisburg.
Mary O'Connell,[1] Harrisburg.
Sarah Jacobs,[1] Harrisburg.
Martha O. Seiler,[3] Harrisburg.
Miss S. Seiler,[3] Harrisburg.
Maragret M. Funk,[1] Harrisburg.
Ella S. Yost,[1] Harrisburg.
Catharine Eichinger,[1] Harrisburg.
Mildred Lewis,[1] Harrisburg.
Sallie E. Hellerman,[1] Harrisburg.
Edna W. Mohler,[1] Harrisburg.
N. Regina Niller,[1] Harrisburg.
Myrtle Hoke,[1] Harrisburg.
Edna Elder,[1] Harrisburg.
P. L. Hocker,[3] Harrisburg.
Caroline Sparrow,[1] Harrisburg.
Grace Eshenour,[1] Harrisburg.
Naomi Bair,[1] Harrisburg.
Mary Hertzler,[1] Harrisburg.
Inda M. Kauffman,[1] Harrisburg.
Edna Walter,[1] Harrisburg.
Stella Grimm,[1] Harrisburg.
J. J. Brehm,[1] Harrisburg.
J. B. Odell,[3] Harrisburg.
Alice Witherow,[1] Harrisburg.
Bertha Spong,[1] Harrisburg.
Gertrude Huber,[1] Harrisburg.
Mabel March,[1] Harrisburg.
Sue Sparrow,[1] Harrisburg.
Katherine Huber,[1] Harrisburg.
Irene Rohrer,[1] Harrisburg.
Ruth Stroh,[1] Harrisburg.
Rena Blumenstein,[1] Harrisburg.
Bertha Turner,[1] Harrisburg.
Margaret Madden,[1] Harrisburg.
Catharine Haifleigh,[1] Harrisburg.
George H. Hill,[1] Harrisburg.
Carrie L. Orth,[1] Harrisburg.
Minnie E. Sample,[1] Harrisburg.
Fannie E. Dunlap,[1] Harrisburg.
Nellie Glennen,[1] Harrisburg.
Mary M. Vollmer,[3] Harrisburg.
Jennie B. Lutz,[1] Harrisburg.
Gertrude Hoffman,[1] Harrisburg.
Anna M. Bender,[1] Harrisburg.
Elizabeth Goldsmith,[1] Harrisburg.
Alice C. McGowan,[1] Harrisburg.
Mary A. Berrier,[1] Harrisburg.
May Beard,[1] Harrisburg.
Sarah E. Swartz,[1] Harrisburg.
Emily J. Adams,[3] Harrisburg.
M. Ella Ryan,[1] Harrisburg.
Minnie E. Gotta,[1] Harrisburg.
L. Minnie Hursh,[1] Harrisburg.
Emma M. Sites,[1] Harrisburg.
Genevra Fritchey,[1] Harrisburg.
Florence Mackenson,[1] Harrisburg.
M. S. Taylor,[3] Harrisburg.
Mrs. A. P. Lamond,[1] Harrisburg.
Lottie R. Hallanlen,[1] Harrisburg.
Agnes E. G. Schlick,[1] Harrisburg.
Elizabeth A. Dum,[1] Harrisburg.
Laura M. Sloat,[1] Harrisburg.
Anna M. Stoner,[1] Harrisburg.
Estella E. Ebner,[1] Harrisburg.
Florence M. English,[1] Harrisburg.
Caroline Baskin,[1] Harrisburg.
Eleanor Trafford,[1] Harrisburg.
Serena C. Knabe,[1] Harrisburg.
Isabella G. Griffith,[1] Harrisburg.
Miss A. L. Crowe,[1] Harrisburg.
Edna F. Mann,[1] Harrisburg.
Anna M. Midlam,[1] Harrisburg.
Mary H. Pendergast,[1] Harrisburg.
Catharine Burd,[1] Harrisburg.
Genevieve Burns,[1] Harrisburg.
Irene E. Loomis,[1] Harrisburg.
Mary R. Warlow,[1] Harrisburg.
Anne V. Crowl,[3] Harrisburg.
John P. Scott,[1] Harrisburg.
J. Henry Williams,[1] Harrisburg.
R. Emma Coleman,[1] Harrisburg.
Anna S. Flickinger,[1] Harrisburg.
Nettie Moyer,[1] Harrisburg.
Helen M. Jauss,[1] Harrisburg.
Florence Lenhart,[1] Harrisburg.
Homezellah Burruss,[1] Harrisburg.
Katherine McFarlan,[1] Harrisburg.
Anna Marshbank,[1] Harrisburg.
S. Elizabeth Adams,[1] Harrisburg.
Alberta Skane,[1] Harrisburg.
Margaret Sullivan,[1] Harrisburg.
Mabel L. Meckley,[1] Harrisburg.
Anna M. Swope,[1] Harrisburg.
Elizabeth S. Baker,[1] Harrisburg.
Emily M. Brown,[1] Harrisburg.
Iola E. Urich,[1] Harrisburg.
Lillie I. Pentz,[1] Harrisburg.
Minnie M. Kreider,[1] Harrisburg.
Helen H. Laucks,[1] Harrisburg.
Ettie V. Shaffner,[1] Harrisburg.
L. La Vene Grove,[1] Harrisburg.
M. H. Thomas,[3] Harrisburg.
Helen Krall,[1] Harrisburg.
Mary Mickey,[3] Harrisburg.
Marie C. Higgins,[1] Harrisburg.
Lillie Miller,[1] Harrisburg.
Anna C. Sandoe,[3] Harrisburg.
Marie Sample,[1] Harrisburg.
Margaret Blalock,[1] Harrisburg.
Grace Laucks,[1] Harrisburg.
Maude I. Gamble,[1] Harrisburg.
Lillian Fitzimons,[1] Harrisburg.
Annie C. Schlayer,[1] Harrisburg.
Stella S. Earley,[1] Harrisburg.
Laura E. Garman,[1] Harrisburg.
Annie L. Weitmyer,[1] Harrisburg.
Clara M. Fisher,[1] Harrisburg.
Mary C. Ebner,[1] Harrisburg.
Ruth K. Wells,[1] Harrisburg.
A. Elizabeth Fahnestock,[1] Harrisb'g.
Sue M. Bratton,[1] Harrisburg.
Elsie L. Butler,[1] Harrisburg.
Caroline Patterson,[1] Harrisburg.
Edith M. Bentzel,[1] Harrisburg.
Anne M. Wert,[1] Harrisburg.
Bertha Berthel,[1] Harrisburg.
Bert Miller,[1] Harrisburg.
Helen Shearer,[1] Harrisburg.
Emily Kepple,[1] Harrisburg.
Josephine Koser,[1] Harrisburg.
Helen Jackson,[1] Harrisburg.
Elizabeth Tittle,[1] Harrisburg.
W. H. Jacobs,[3] Harrisburg.
Kath. G. Hammelbaugh,[1] Harrisburg.
Maude Kennedy,[1] Harrisburg.
Anna Walzer,[1] Harrisburg.
Annie M. Watson,[1] Harrisburg.
Mary G. Edwards,[3] Harrisburg.
Mabel E. Vaughn,[1] Harrisburg.
Elizabeth Strickland,[1] Harrisburg.
Lizzie F. Jauss,[1] Harrisburg.
Renee Hender,[1] Harrisburg.
Anna Bernhardt,[1] Harrisburg.
Laura Frutchey,[1] Harrisburg.
Miss A. M. Tittle,[1] Harrisburg.,
Lile George,[3] Harrisburg.
G. S. Machen,[3] Harrisburg.
Rebecca Orth,[1] Harrisburg.
Mary H. Frantz,[1] Harrisburg.
Clara S. Shireman,[1] Harrisburg.
Elizabeth Knox,[1] Harrisburg.
Jessie R. Hartman,[3] Harrisburg.
Bessie March,[1] Harrisburg.
Anna Sweeney,[1] Harrisburg.
Sylvia A. Zerbe,[1] Harrisburg.
Kate M. Piper,[1] Harrisburg.
Carrie L. Faries,[1] Harrisburg.
G. H. Goetz,[3] Harrisburg.
Grace M. Wonders,[1] Harrisburg.
Flora Bentzel,[1] Harrisburg.
Clara Lutz,[1] Harrisburg.
Iva C. Weirich,[1] Harrisburg.
Annie Laurie,[1] Harrisburg.
Mary E. Skane,[1] Harrisburg.
M. H. Layton,[3] Harrisburg.
Clara E. Reed,[1] Harrisburg.
Helen Taylor,[1] Harrisburg.
Ida E. Brown,[1] Harrisburg.
Blanche Meloy,[1] Harrisburg.
Julia Zudrell,[1] Harrisburg.
Ida Stewart,[1] Harrisburg.
W. S. Steele,[3] Harrisburg.
A. J. Beitzel,[1] Harrisburg.
Mary K. Blaikie,[1] Harrisburg.
Jessie C. Bowers,[1] Harrisburg.
Elizabeth M. Craighead,[1] Harrisburg.
Lorena G. Evans,[1] Harrisburg.
W. M. Fahnestock,[1] Harrisburg.
P. A. Fishel,[1] Harrisburg.
M. Ward Flemming,[1] Harrisburg.
M. A. Grove,[1] Harrisburg.
G. N. C. Henschen,[1] Harrisburg.
Bertha B. Herring,[1] Harrisburg.
Arthur H. Hull,[1] Harrisburg.
E. F. Keller,[1] Harrisburg.
R. L. Hauer,[1] Harrisburg.
Cora A. Adams,[1] Harrisburg.
Clara L. Meredith,[3] Harrisburg.
Myra Connelly,[1] Harrisburg.
Grace McLaughlin,[1] Harrisburg.
Edna M. Peters,[1] Harrisburg.
Fannie L. Johnson,[3] Harrisburg.
Virginia Hoagland,[1] Harrisburg.
C. F. Martz,[1] Harrisburg.
Zachery T. Meixel,[1] Harrisburg.
M. Katharine McNiff,[1] Harrisburg.
Mary C. Orth,[1] Harrisburg.
Mary E. Richardson,[1] Harrisburg.
Frank G. Roth,[1] Harrisburg.
Anna M. Saul,[1] Harrisburg.
Bertram W. Saul,[1] Harrisburg.
M. Lou Sheetz,[1] Harrisburg.
Bessie E. Kast,[1] Harrisburg.
Katherine Reily,[1] Harrisburg.
J. A. Smyser,[1] Harrisburg.
Grace Tatnal,[1] Harrisburg.
Katherine Zeiders,[1] Harrisburg.
E. G. Rose,[1] Harrisburg.
Emma F. Beatty,[1] Harrisburg.
Alberta Zimmerman,[1] Harrisburg.
Anna McCormick,[2] Harrisburg.
S. P. Stambaugh,[3] Harrisburg.
Mary R. Pilkay,[1] Harrisburg.
Mabel A. Charles,[1] Harrisburg.
Ella F. Martin,[1] Harrisburg.

Julia Piper,[1] Harrisburg.
S. Edith Hoke,[1] Harrisburg.
Sara Coleman,[1] Harrisburg.
George R. Hull,[1] Harrisburg.
Percy L. Grubb,[1] Harrisburg.
A. M. Lindsay,[1] Harrisburg.
Jesse F. Rees,[1] Harrisburg.
James I. Hamaker,[1] Harrisburg.
Fred O. Smith,[1] Harrisburg.
Charles B. Fager, Jr.,[3] Harrisburg.
E. S. Wolfe,[1] Harrisburg.
J. C. Peet,[1] Harrisburg.
Harry E. Tood,[1] Harrisburg.
Liliah Zug,[1] Harrisburg.
Edith Walmer,[1] Harrisburg.
Alice Nelson,[1] Harrisburg.
Nan Hemperly,[1] Harrisburg.
Jennie Mumma,[1] Harrisburg.
Ruth Hamilton,[1] Harrisburg.
Dora Sourbeer,[1] Harrisburg.
Mary E. Rynard,[3] Harrisburg.
Alice Ryan,[1] Harrisburg.
H. H. Fleisher, Harrisburg.
U. G. Fry, Harrisburg.
Josephine Cummings,[1] Harrisburg.
W. C. Heiges,[3] Harrisburg.
Mary Y. McReynolds, Harrisburg.
Edith L. Breitinger, Harrisburg.
May Beatty,[1] Harrisburg.
Annie L. Morgan,[1] Harrisburg.
Mary H. Hogan,[1] Harrisburg.
Minnie K. McConnell,[1] Harrisburg.
Caroline D. Gebhardt,[1] Harrisburg.
M. Maude Sherwood,[1] Harrisburg.
Mary H. Bechdolt,[1] Harrisburg.
Anna E. Bratton,[1] Harrisburg.
Anna O'Connell,[1] Harrisburg.
Anna Patterson,[1] Harrisburg.
Cora I. Gerhart,[1] Harrisburg.
Zella H. Book,[1] Harrisburg.
Eva M. Johnson,[1] Harrisburg.
Susan M. Pelen,[1] Harrisburg.
Carrie Myers,[3] Harrisburg.
A. D. E. Killinger,[1] Harrisburg.
Mrs. Ellen E. Luce,[1] Harrisburg.
D. F. Fackler,[1] Harrisburg.
W. H. Marshall,[1] Harrisburg.
Catharine Payne,[1] Harrisburg.
Annie Woof,[1] Harrisburg.
W. E. Kirk,[3] Harrisburg.
Mary M. Markell,[1] Harrisburg.
Cora Dugan,[1] Harrisburg.
Phoebe Robison,[1] Harrisburg.
Nora G. Clancy,[1] Harrisburg.
Leah D. Fletcher,[1] Harrisburg.
Katharine Kulp,[1] Harrisburg.
Hattie Weidenhammer,[1] Harrisburg.
Laura Urich,[1] Harrisburg.
D. A. Hammaker,[1] Harrisburg.
Alicia Zierden, Harrisburg.
Anna M. Sands,[1] Harrisburg.
L. Mabel Sands,[1] Harrisburg.
John F. Kaufman,[1] Harrisburg.
Lois Booker,[1] Harrisburg.
Maud Robertson,[1] Harrisburg.
Jane Dibler,[1] Harrisburg.
Margaret Burns,[1] Harrisburg.
Helen Reynolds,[1] Harrisburg.
Minerva Hepford,[1] Harrisburg.
Julia Ryan,[1] Harrisburg.
George B. Colestock, Harrisburg.
E. C. Gillan,[1] Harrisburg.
Jennie Martin Rich, Harrisburg.
H. L. Smith, Harrisburg.
F. C. Lee,[1] Harrisburg.
Martha J. Yencel,[1] Harrisburg.
Charles S. Meck, Harrisburg.
Frank L. Meck, Harrisburg.
Mary E. Hoffman, Harrisburg.
Della Simonetti,[1] Harrisburg.
William Albright, Harrisburg.
H. M. Weigel, Harrisburg.
E. H. Hess, Harrisburg.
M. Belle Orris,[1] Steelton.
Gertrude Rupp,[1] Steelton.
N. A. Geany,[1] Steelton.
Lillie M. Nankivell,[1] Steelton.
Edna Garraty,[1] Steelton.
G. W. Henry,[4] Steelton.
Henrietta Carl,[1] Steelton.
Linnie A. Hess,[1] Steelton.
Edith G. Stees,[1] Steelton.
Minnie H. Huber,[1] Steelton.
Melissa M. Johnson,[1] Steelton.
Isabella B. Johnson,[1] Steelton.
C. E. Detweiler,[4] Steelton.
Mary R. Hetrick,[1] Grantville.
Margaret Yeager,[1] Halifax.
Gertrude Brubaker,[1] Hummelstown.
Mary E. Gardner,[1] Royalton.
Edna Erb,[1] Hockersville.
Amos Hess,[1] Derry Church.
Aletha Clegg,[1] Oberlin.
Margie I. Dunkle,[1] Steelton.
Elizabeth W. Branyan,[1] Steelton.
Mary J. Denison,[1] Dauphin.
Esther Denison,[1] Dauphin.
Aura C. Imes,[1] Steelton.
Idella M. Fisher,[1] Steelton.
Anna L. Gardner,[1] Steelton.
T. J. Hoffman,[1] Enders.
H. R. Brubaker,[1] Halifax.
J. W. Fields,[1] Steelton.
Vernon R. James,[1] Steelton.
Elizabeth Gruber,[1] Middletown.
Edith M. Peck,[1] Middletown.
Minnie L. Ditty,[1] Millersburg.
Jennie Hoff,[1] Millersburg.
Jennie Romberger,[1] Millersburg.
Charles A. Miller,[1] Millersburg.
Bertha V. Haverstick,[1] Millersburg.
Gertrude Chapin,[1] Millersburg.
Edna T. Kurtz,[1] Middletown.
Earl Romberger,[1] Elizabethville.
Anna E. Gruber,[1] Bachmanville.
Paul L. Faust,[1] Halifax.
J. W. Hoover,[3] Halifax.
J. F. Keiffer, Millersburg, R. 2.
James I. Grubb,[1] Millersburg.
George M. Weaver,[1] Millersburg.
Dora E. Hoy,[1] Millersburg, R. D. 2.
J. E. Keiffer, Millersburg, R. D. 2.
Robert Keiper,[1] Middletown.
Davis Garver,[1] Middletown, R. D.
Wm. C. Leitzel,[1] Millersburg, R. 2.
Madelene Mason,[1] Williamstown.
Ira Brinser,[1] Middletown.
Walter Spurrier,[1] Middletown.
William Christman,[1] Steelton.
Edna L. Kreiner,[1] Oberlin.
J. E. Unger,[1] Penbrook, R. D. 2.
Anna Luft,[1] Royalton.
D. F. Detter,[3] Williamstown.
F. D. Keboch,[3] Williamstown.
Eva M. Punch,[1] Williamstown.
Bertha L. Gayman,[1] Dauphin.
Gertrude M. Swalm,[1] Williamstown.
Mary Shellahamer,[1] Union Deposit.
Grayce Koons,[1] Penbrook.
Adam Smith,[1] Penbrook, R. D. 2.
Clarence Swartz,[1] Penbrook, R. D. 2.
George S. Stuart,[3] Hershey.
D. D. Brandt,[1] Hershey.
Catharine Alleman,[1] Middletown, R.
Helen Alleman,[1] Middletown, R. D.
A. J. Dohner,[3] Elizabethville.
B. Irene Downes,[1] Steelton.
Anna L. Meshey,[1] Steelton.
Annie J. Hines,[1] Williamstown.
Edward Sheetz,[1] Carsonville.
Gertrude Eardman,[1] Millersburg, R.
Mollie Bowman,[1] Gratz.
A. W. Stauffer,[1] Swatara Station.
Clia M. Hoffman,[1] Steelton.
E. S. Miller,[1] Highspire.
Myrtle L. Bachman,[1] Highspire.
Sue S. Gallatin,[1] Dauphin.
Florence M. Yearts,[1] Elizabethville.
Ellen Miller,[1] Elizabethville.
Kathryn E. Malick,[1] Williamstown.
Rebecca J. Seip,[1] Wiconisco.
H. W. Dodd,[1] Lykens.
David E. Brinser,[1] Middletown, R.
Ray Gruber,[1] Bachmanville.,
Kathryn, Noll,[1] Millersburg, R.D.1.
Susie Mucher,[1] Gratz.
C. C. McLaughlin,[1] Dietrich.
Violet Nissley,[1] Penbrook.
Barbara Hillard,[1] Penbrook.
Mary J. Levan,[1] Penbrook.
Jennie Kline,[1] Penbrook.
J. W. McGarvey,[1] Penbrook.
Triphy Gottshall,[1] Pillow.
Edith Grell,[1] Lykens.
R. W. Lentz,[1] Fisherville.
Darius Wiest,[1] Gratz.
Warren Matter,[1] Gratz.
Elizabeth Driscoll,[1] Wiconisco.
Elizabeth McWilliams,[1] Wiconisco.
Dorothy Goss,[1] Middletown.
Myra A. Goss,[1] Middletown.
May V. Moyer,[1] Derry Church.
Charles H. Parmer,[1] Dietrich.
C. M. Weigle,[3] Highspire.
John B. Hoke,[1] Penbrook.
Alva Grunden,[1] Paxtang.
Emma A. Henry,[1] Penbrook.
Grace I. Henry,[1] Penbrook.
O. E. Good,[1] Progress.
S. S. Ebersole,[1] Middletown.
Fannie D. Hatz,[1] Middletown.
Anna B. Douglass,[1] Middletown.
J. B. Martin,[1] Middletown.
C. L. Grimm,[1] Pillow.
C. F. Howard,[1] Steelton.
R. E. Runkle,[1] Linglestown.
W. G. Goodman,[1] Union Deposit.
C. E. Boyer,[2] Elizabethville.
Elizabeth Hoffner,[1] Elizabethville.
Zora Miller,[1] Hummelstown.
Annie B. Nye,[1] Hummelstown.
Elizabeth Z. Price,[1] Hummelstown.
S. M. Mumma,[1] Piketown, R. D. 1.
Ralph D. Reider,[3] Middletown.
Tillie L. Booser,[1] Derry Church.
Myra W. Kulp,[1] Bachmanville.
Rosa Hainlen,[1] Middletown.
Vera Moyer,[1] Lucknow.
Myrtena Allen,[1] Highspire.
Anna A. Shoffstall,[1] Gratz.
P. H. Stauffer,[1] Union Deposit.
Mary E. Gish,[1] Elizabethville.
L. B. Hauer,[1] Union Deposit.
I. F. Bogner,[1] Dauphin.
Caroline T. Rauch,[1] Linglestown.
J. T. Neiman,[1] Berrysburg.
J. B. Kilrain,[2] Williamstown.
Riley B. Shope,[1] Linglestown.
Blanche B. Barner,[1] Derry Church.
Verna I. Romberger,[1] Lykens.
M. M. Watkeys,[1] Williamstown.
Elsie M. Haller,[1] Williamstown.
E. Myrtle Garrett,[1] Hummelstown.
Marl Snyder,[1] Berrysburg.
Raymond J. Coleman,[1] Gratz.
Anna E. Latsha,[1] Pillow.
Anna V. Matter,[1] Loyalton.
C. E. Henninger,[1] Elizabethville, R.
Daisey Ramsey,[1] Williamstown.
Lillie Evans,[1] Williamstown.
Dollie E. Donley,[1] Williamstown.
Chas. De V. Row,[1] Williamstown.
Elizabeth Kingston,[1] Williamstown.
Ella N. Shutt,[1] Elizabethville.
Emma Bowen,[1] Williamstown.
Elizabeth Schoffstall,[1] Wiconisco.
Rena Park,[1] Middletown.
Lena Eby,[1] Middletown.
Marie Melchior,[1] Middletown.
Elizabeth Neagle,[1] Middletown.
Lillian Hoffman,[1] Middletown.
Annie M. Rambler,[1] Middletown.
Cora E. Robuck,[1] Penbrook, R. D. 2.
J. E. Zimmerman,[1] Hummelstown.
Ruth Kunkle,[1] Paxtang.
Anna Eisenhauer,[1] Union Deposit.
Viola Lichtenwalner,[1] Steelton.
Edith Lichtenwalner,[1] Steelton.
Laura Stouffer,[1] Progress.
John H. Espenshade,[1] Middletown.
Anna M. Cannon,[1] Elizabethville.
Gertrude H. Nisley,[1] Linglestown.
Anna E. McGann,[1] Fisherville.
May Hershey,[1] Derry Church.
Grace Schaffner,[1] Hummelstown.
Isaac Reiff,[3] Dauphin.
E. A. Lerch,[1] Grantville.
J. F. Adams,[3] Millersburg.
Katharine P. Smith,[2] Millersburg.
Elizabeth J. Reber,[4] Millersburg.
Mabel E. Cooper,[1] Millersburg.
Miriam Keever,[1] Middletown.
Celia M. Cassel,[1] Steelton.
William Winegardner,[1] Dauphin.
Blanche Scholl,[1] Halifax, R. D.
Ethel Scholl,[1] Halifax, R. D.
Esther M. Long,[2] Highspire.
H. A. Hampton,[1] Grantville, R. D.
Martha E. Mark,[1] Millersburg.
E. M. Shellenberger,[1] Middletown.
Lyda Peters,[1] Middletown.
Ola Myers,[2] Middletown.
Annie M. Bletz,[1] Middletown.
Harriet M. Keever,[1] Middletown.
Bertha M. Oyler,[4] Middletown.
Jennie L. McClure,[1] Middletown.
Margaret K. Smith,[1] Middletown.
Mary E. Fritz,[1] Middletown.
Jno. S. Latsha,[1] Pillow.
Ella M. Wagner,[1] Union Deposit.
William Minsker,[1] Dauphin.
Hulda Longenecker,[1] Linglestown.
Kathrine Shriver,[1] Linglestown.
William E. Weills,[3] Linglestown.

P. R. Hallman,[1] Middletown.
A. S. Quickel,[1] Middletown.
W. D. Faust,[1] Middletown.
E. I. Kline,[1] Williamstown.
Beulah Shutt,[1] Elizabethville.
Beulah Keboch,[1] Berrysburg.
J. C. Deibler,[1] Berrysburg.
Walter C. Kocher,[1] Berrysburg.
John I. Clay,[1] Grantville, R. D. 2.
Hannah A. Kieffer,[3] Millersburg.
F. E. Shambaugh,[3] Wiconisco.
Charles S. Davis,[3] Steelton.
L. B. Nye,[2] Steelton.
Mary Shimmell,[2] Steelton.
Mary R. White,[2] Steelton.
Roscoe Bowman,[2] Steelton.
W. W. G. Jones,[2] Steelton.
Charles F. Newton,[2] Steelton.
Charles E. Albert,[2] Steelton.
Eva F. Stoner,[2] Steelton.
W. M. Harclerode,[2] Steelton.
S. Ellen McGinnes,[2] Steelton.
Edith Orndorff,[1] Wiconisco.
Anna Orndorff,[1] Wiconisco.
Sara Morgan,[1] Wiconisco.
Carrie V. Brown,[1] Steelton.
Pearl A. Hill,[1] Steelton.
Elizabeth V. Clancy,[1] Steelton.
Matilda M. Regan,[1] Steelton.
Jessie M. Wright,[1] Steelton.
Honora M. Gaffney,[1] Steelton.
Mary R. Shutter,[1] Steelton.
E. Allen Drawbaugh,[4] Steelton.
J. O. Russell,[4] Steelton.
Alice A. Juniper,[1] Steelton.
Blanche E. Clever,[1] Steelton.
Ada M. Hill,[1] Steelton.
Susie Lighty,[1] Steelton.
Nora Crouse,[1] Steelton.
May B. Osman,[1] Steelton.

DELAWARE—31.

A. G. C. Smith,* Media.
Charles P. Sweeney,* Darby.
G. N. Wilson,* Wayne.
Thos. S. Cole,* Chester.
Joseph W. Huff,[3] Llanerch.
Harriet E. Worrell,[1] Ogden.
Elizabeth Turner,[1] Lansdowne.
W. H. Johnston, Norwood Station.
J. F. Parsons,[3] Ridley Park.
H. Ross Smith,[2] Lansdowne.
D. O. Parmley,[1] Brandywine Summit.
H. Daisy Smith,[1] Boothwyn.
Mary F. Jones,[3] Llanerch.
Elizabeth B. Thomas,[1] Media.
Lillian M. Pike,[1] Media.
Ellen Fussell,[1] Media.
Esther A. McKeon,[1] Morton.
Margaret E. Troxell,[1] Rutledge.
Margaret R. Stanton,[1] Boothwyn.
Mary E. Dougherty,[1] Crum Lynne.
Mattie C. Hutchinson,[1] Holmes.
Mary H. Rhode,[1] Rutledge.
H. A. Markley,[3] Linwood Station.
Amy Miller,[3] Colwyn.
Martha W. Doyle,[1] Chester.
Joseph G. E. Smedley,[3] Chester.
J. Eugene Baker,[3] Lansdowne.
B. Holmes Wallace,[4] Swarthmore.
W. L. Philips,[3] Lansdowne.
Margaret Stetsel,[1] Chester.
M. B. King,[3] Wayne.

ELK—10.

J. W. Sweeney,* St. Marys.
Alice G. Houghtaling,[1] Wilcox.
Amanda L. Wilcox,[1] Wilcox.
George W. Mitchell,[4] Johnsonburg.
W. M. Pierce,[4] Ridgway.
Ross A. Snyder,[3] Wilcox.
J. J. Lynch,[4] St. Marys.
B. H. Rhinesmith,[4] Ridgway.
C. M. Rosenbery,[3] Ridgway.
E. H. Schaeffer,[3] Brockport.

ERIE—9.

I. H. Russell,* North East.
H. C. Missimer,* Erie.
Bert M. LeSuer,[1] Union City.
Erie Teachers' Association,‡ Erie.
Jessie J. Wheeler,[2] Erie.
John C. Diehl,[2] Erie.
W. J. Snyder,[6] Edinboro.
Cora A. Smith,[2] Erie.
W. E. Dimorier,[1] Erie.

FAYETTE—7.

W. S. Deffenbaugh,* Connellsville.
C. J. Scott,* Uniontown.
J. Buell Snyder,[3] Perryopolis.
F. W. Wright,[3] Uniontown.
C. H. Schwab,[3] Connellsville.
T. S. Bracken,[3] Perryopolis.
Florence Montgomery,[1] Fayette City.

FOREST—10.

D. W. Morrison,* Tionesta.
Juliana Clark,[2] Marienville.
Harriet Swanson,[2] Marienville.
Mildred Russell,[1] Marienville.
Marie Engdahl,[1] Clarington.
Kate Guenther,[3] Brookston.
Alice Frantz,[1] Clarington.
Flossie Braden,[1] Cooksburg.
Evelyn Grove,[1] Tionesta.
F. E. Thompson,[3] West Hickory.

FRANKLIN—13.

L. E. Smith,* Chambersburg.
Samuel Gelwix,* Chambersburg.
Victor O. Weidler,[1] Waynesboro.
Ida M. Negley,[1] Waynesboro.
Etta Williams,[1] Markes.
Miss K. C. Eyster,[1] Chambersburg.
Fanny Shatzley,[1] Chambersburg.
W. F. Zumbro,[3] Chambersburg.
Mary Cashman,[1] Chambersburg.
Flo M. Richardson,[1] Waynesboro.
Emma K. Goetz,[1] Greencastle.
Anna Shryock,[1] Chambersburg.
W. W. DeShong,[3] Greencastle.

FULTON—1.

B. C. Lamberson,* McConnellsburg.

GREENE—2.

John C. Stewart,* Jefferson.
Kent Kelley,[3] Dilliner.

HUNTINGDON—5.

J. G. Dell,* Huntingdon.
E. R. Barclay,* Huntingdon.
Charles Calvert Ellis,[4] Huntingdon.
Charles O. Frank,[3] Huntingdon.
Lenna Kieffer,[2] Huntingdon.

INDIANA—5.

J. C. Smith,[6] Indiana.
H. D. Condron,[4] Blairsville.
John N. James,[6] Indiana.
J. N. K. Hickman,[6] Indiana.
Jean R. McElhaney,[6] Indiana.

JEFFERSON—7.

L. Mayne Jones,* Brookville.
F. S. Jackson,* Punxsutawney.
Agathe Greeley,[1] Brockwayville.
Theresa Straitiff,[1] Anita.
C. E. Wilson,[4] Brookville.
W. M. Reiff,[4] Reynoldsville.
R. W. Clawges,[2] Reynoldsville.

JUNIATA—6.

Josiah H. Deen,* Academia.
E. E. Ferster,[1] Richfield.
N. H. Arbogast,[1] Richfield.
C. O. Lauver,[1] Richfield.
C. C. Book,[1] Port Royal.
E. A. Hummel,[3] Mifflintown.

LACKAWANNA—22.

J. C. Taylor,* Scranton.
George Howell,* Scranton.
M. J. Lloyd,* Taylor.
C. F. Hoban,* Dunmore.
M. W. Cummings,* Olyphant.
James H. Lally, Olyphant.
Frank A. Kelly, Olyphant.
Thos. L. Gilmartin,* Carbondale.
George W. Phillips,‡ Scranton.
T. F. Hanahue,[3] Olyphant.
H. L. Burdick,[2] Scranton.
Harry Walsh,[4] Scranton.
H. H. Rounds,[3] Vandling.
John J. Costello,[1] Scranton.
Ronald P. Gleason,[3] Scranton.
Rhys Powell,[2] Scranton.
Marcia G. Foster,[2] Jermyn.
Gertrude Vail,[1] Jermyn.
W. H. Scranton,[2] Scranton.
Albert H. Welles,[3] Scranton.
H. B. Anthony,[3] Peckville.
R. M. Archibald,[3] Jermyn.

LANCASTER—52.

M. J. Brecht,* Lancaster.
R. K. Buehrle,* Lancaster.
Daniel Fleisher,* Columbia.
J. W. Lansinger,[6] Millersville.
J. P. McCaskey,‡ Lancaster.
Elizabeth Sahm,[1] Lititz.
Cora A. Reidenbach,[1] Lititz.
E. R. Kraybill,[3] New Holland.,
H. E. Gehman,[3] Ephrata.
F. S. Klinger,[1] Ephrata.
E. R. Ruhl,[3] Landisville.
A. S. Longenecker,[3] Lititz.
Margaret H. Purple,[1] Columbia.
Annie B. Hershey,[1] Columbia.
Eva Stevenson,[1] McCalls Ferry.
E. L. Heilman,[3] Christiana.
Mary Riddle,[3] Marietta.
Henry L. Gise,[2] Elizabethtown.
Della Webb,[1] Quarryville.
I. R. Kraybill,[3] Mount Joy.
H. F. Zerger,[3] Columbia.
Mamie Kofroth,[1] Rothsville.
William A. Morning,[1] Elizabethtown.
LeRoy G. Mumma,[1] Brownstown.
Anna R. Kraybill,[1] Mt. Joy.
Marguerite M. Herr,[1] Mt. Joy.
E. Oram Lyte,‡ [6] Millersville.
Nathan C. Schaeffer,‡ Lancaster.
Mrs. Nathan C. Schaeffer, Lancaster.
Paul A. Herr,[2] Lancaster.
Harry G. Harman,[1] Bowmansville.
Lillian Brunner,[1] Reinholds Station.
Naomi Lantz,[1] Lancaster.
P. M. Harbold,[9] Millersville.
A. B. Hiester,[1] Lancaster.
Mrs. I. R. Kraybill, Mt. Joy.
Ida R. McWilliams,[1] Lancaster.
A. G. Heisey, Elizabethtown.
Naomi Bausman,[1] Millersville.
D. C. Reber,[3] Elizabethtown.
Bella M. Weitzel,[3] Lancaster.
J. N. Olweiler, Elizabethtown.
Carrie E. Myers,[1] Millersville.
B. F. Heiges,[3] Manheim.
B. W. Fisher,[3] Lancaster.
N. C. Norris,[3] Little Britain.
A. C. Wertsch,[3] Quarryville.
B. H. Heller,[3] Lancaster.
Leon DeHoff,[1] Lancaster.
John D. Pyott, Lancaster.
E. H. Burd,[3] Elizabethtown.
John F. Kob,[3] Elizabethtown.

LAWRENCE—5.

W. Lee Gilmore,* New Castle.
T. A. Kimes,* New Castle.
R. G. Leslie,[3] New Castle.
J. A. Shott,[1] New Wilmington.
G. A. Dickson,[3] New Castle.

LEBANON—62.

John W. Snoke,* Lebanon.
Edgar Reed,* Lebanon.
Henry Houck, Lebanon.
Mary Bacastow,[1] Palmyra, R. D. 1.
A. S. Heisey,[1] Newmanstown, R.
John F. Light,[1] Annville, R. D. 2.
V. Earl Light,[1] Annville, R. D. 2.
D. W. Light,[1] Annville, R. D. 2.
Raymond H. Light,[1] Annville, R. 2.
G. Mason Snoke,[1] Lebanon.
Irwin Boeshore,[2] Schaefferstown.
Raymond F. Schack,[1] Richland.
Alma Gingerich,[1] Palmyra.
E. E. Snyder,[1] Palmyra.
Mabel A. Yeagley,[1] Lebanon.
W. H. Alspach,‡ [2] Newmanstown.
Miles B. Koons,[1] Lebanon, R. D. 10.
Rhoda M. Riegel,[1] Lebanon.
Anna D. Haertter,[1] Lebanon.
Harry D. Spittler,[1] Jonestown, R. 1.
Alice L. Light, Lebanon, R. D. 3.
Ed. D. Fake,[1] Jonestown, R. D. 1.
C. A. Boyer,[1] Lebanon.
Fannie Focht,[1] Lebanon.
R. P. Wolfersberger,[3] Bismarck.
A. J. Bowman,[1] Bismarck.
Gertrude Sealer,[1] Bismarck.
Robert J. Weigley,[1] Richland.
H. B. Moyer,[2] Palmyra.
George B. Evans,[1] Palmyra.
Henry Early,[1] Palmyra.
A. S. Bowman,[1] Palmyra.
Ira G. Hartz,[1] Palmyra.
C. W. Bachman,[3] Palmyra.
Mary E. Bowman,[1] Palmyra.
Anna H. Bicksler,[1] Palmyra.
Alice S. Light,[1] Palmyra.
S. W. Beckley,[1] Lebanon, R. D. 9.
C. G. Dotter,[3] Annville.
Bessie G. Phillips,[1] Onset, R. D. 2.
David S. Walmer,[1] Jonestown.
Anna Brandt,[1] Myerstown.

Alice M. Shaak,[1] Lebanon, R. D. 5.
Tosie M. Shaak,[1] Lebanon, R. D. 5.
Ida Groh,[1] Heilmandale.
Katie Rittle,[1] Lebanon.
F. W. Light,[1] Annville.
D. B. Fritz,[1] Annville.
Emma Kreider,[1] Lebanon.
Hattie A. Haak,[1] Myerstown.
Elizabeth Crouse,[2] Lebanon.
C. E. Heilman,[3] Cleona.
Emerson Heilman,[1] Lebanon.
J. J. Behney,[3] Lebanon.
D. T. Werner,[2] Lebanon.
Ray G. Light,[2] Avon.
W. M. Hileman,[3] Cleona.
Fred L. Coleman,[2] Lebanon.
M. W. Smith,[2] Lebanon.
J. E. Lehman,[1] Annville.
E. M. Balsbaugh,[3] Lebanon.
S. F. Pelton,[2] Lebanon.

LEHIGH—11.

Alvin Rupp,* Allentown.
Robert C. Horn,[1] Allentown.
J. O. Knauss, Emaus.
J. W. Snyder,[3] Slatington.
G. E. Oswald,[3] Hokendauqua.
Abner H. Buck,[3] Catasauqua.
H. J. Reinhard,[4] Catasauqua.
F. C. Linderman,[4] Egypt.
Rebecca McFetridge,[1] Hokendauqua.
Annie Conaghan,[1] Coplay.
Wilmer J. Long,[1] Alburtis.

LUZERNE—83.

Frank P. Hopper,* Wilkes-Barre.
James M. Coughlin,‡ * Wilkes-Barre.
A. P. Diffendafer,* Nanticoke.
David A. Harman,* Hazleton.
M. F. Shannon,[1] Wilkes-Barre.
F. C. Bowersox, Wilkes-Barre.
Margaret Carr,[1] Drifton.
Anna Sensenbach,[2] Freeland.
A. W. Marvin,[4] Pittston.
P. F. Caffrey,[3] Sugar Notch.
Abbie Hower,[2] Wilkes-Barre.
J. L. Welty,[3] Dorranceton.
H. H. Zeiser,[2] Wilkes-Barre.
Elizabeth Verlenden,[2] Wilkes-Barre.
Katherine Toohey,[1] Wilkes-Barre.
Rosa Greenstein,[1] Wilkes-Barre.
Marian Sturdevant,[2] Wilkes-Barre.
Herman Fritz,[3] Wilkes-Barre.
George F. Hutter,[3] Wilkes-Barre.
Ida M. Brenner,[1] Wilkes-Barre.
J. H. Baughman,[3] Wilkes-Barre.
Jessie L. Gilchrist,[1] Hazleton.
Charlotte M. Stock,[1] Wilkes-Barre.
Lena E. Faulds,[2] Wilkes-Barre.
Nellie Ritchie,[1] Wilkes-Barre.
E. L. Whatenecht,[1] Forty Fort.
Enola B. Guie,[2] Wilkes-Barre.
A. W. Moss,[2] Wilkes-Barre.
J. P. Breidinger,[3] Wilkes-Barre.
J. D. Geist,[3] Hazleton.
Helen Patterson,[1] Wilkes-Barre.
Harriet Wagner,[1] Wilkes-Barre.

Hazle Township.

Joseph B. Gabrio,* Hazleton.
Andrew Branigan,[1] Hazleton.
Mary Burns,[1] Hazleton.
Mary E. Boyle,[1] Hazleton.
Harry Beach,[1] Hazleton.
Aubrey Cook,[1] Hazleton.
Nellie Cannon,[1] Hazleton.
Alice Crook,[1] Hazleton.
Cecil Cullen,[1] Hazleton.
Mary Carpenter,[1] Hazleton.
Hattie Cunningham,[1] Hazleton.
Annie Conaham,[1] Hazleton.
Philip Clark,[1] Hazleton.
Kate Dever,[1] Hazleton.
Louisa Davis,[1] Hazleton.
William Davis,[1] Hazleton.
Annie E. Dougherty,[1] Hazleton.
Mercedes Dougherty,[1] Hazleton.
John D. Evans,[1] Hazleton.
Anna May Fagan,[1] Hazleton.
John Gaffney,[1] Hazleton.
M. W. Garrette,[1] Hazleton.
Edna Gettinger,[1] Hazleton.
Mary Gallagher,[1] Hazleton.
Amos Hinkle,[1] Hazleton.
Annie Helferty,[1] Hazleton.
Annie Kinney,[1] Hazleton.
Margaret McCullough,[1] Hazleton.
John McNertney,[1] Hazleton.
James McGinness,[1] Hazleton.
Maria McCarron,[1] Hazleton.
Charles McLaughlin,[1] Hazleton.
Lucy Mann,[1] Hazleton.
Catherine Martin,[1] Hazleton.
Emelie Mane,[1] Hazleton.
Mary O'Donnell,[1] Hazleton.
Lulu Pengelly,[1] Hazleton.
Ella Quirk,[1] Hazleton.
Peter Reilley,[1] Hazleton.
Daniel Roth,[1] Hazleton.
Ida Roderick,[1] Hazleton.
Owen Sharkey,[1] Hazleton.
Matilda Schnabe,[1] Hazleton.
Ellen Somers,[1] Hazleton.
Madge Scott,[1] Hazleton.
Catherine Sharkey,[1] Hazleton.
S. P. Turnbach,[1] Hazleton.
Jean Taylor,[1] Hazleton.
Margaret Williams,[1] Hazleton.
Joseph Widzbor,[1] Hazleton.

LYCOMING—18.

G. B. Milnor,* Muncy.
Charles Lose,* Williamsport.
Lila M. Fisher,[1] Williamsport.
Mabel S. Hahn,[1] Williamsport.
Isa R. Pratt,[1] Williamsport.
Virginia Martin,[1] Williamsport.
R. T. McLarin,[1] Williamsport.
J. A. Kiess,[1] Williamsport.
George H. Hugus, Williamsport.
M. A. Shorkley,[1] Williamsport.
Caroline MacMinn,[1] Williamsport.
Laura M. Freed,[1] Williamsport.
Rena Fankeberger,[4] Williamsport.
Mary C. Seaman,[1] Williamsport.
Gertrude A. Myers,[1] Williamsport.
Martha C. Thatcher,[1] Williamsport.
P. M. Bullard,[3] Williamsport.
L. J. Ulmer,[1] Williamsport.

MCKEAN—9.

Burdette S. Bayle,* Smethport.
Edward E. Schermerhorn,* Bradford.
Thomas G. McCleary,* Kane.
A. C. Hawkins, Bradford.
Edith Smith,[1] Rew.
Versa Murray,[1] Rew.
F. R. Neild,[3] Kane.
C. H. Munson,[3] Bradford.
F. A. Berkenstock,[4] Port Allegheny.

MERCER—17.

G. B. Gerberich,* Greenville.
S. H. Hadley,* Sharon.
C. B. Smathers,[4] Grove City.
Mary Brown,[4] Greenville.
Florence Caldwell,[1] Greenville.
Pearl Kanengeiser,[4] Greenville.
Anna Bean,[1] Greenville.
Clara Dickey,[1] Greenville.
Maybelle Canon,[1] Greenville.
Adella Mowry,[1] Greenville.
Nina Ogden,[2] Greenville.
Wynona Baker,[2] Greenville.
E. C. Musser,[2] Greenville.
Eva Bacher,[2] Greenville.
Marie Dickey,[2] Greenville.
T. Theodore Benze,[3] Greenville.
H. M. B. Lehn,[2] Greenville.

MIFFLIN—10.

James F. Wills,* Belleville.
T. L. Brooks,* Lewistown.
Mary L. Wendt,[3] Lewistown.
Margaret Bennett,[1] Belleville.
Anna W. Gardner,[1] Belleville.
Mrs. James F. Wills, Belleville.
Grace Felker,[4] Lewistown.
J. B. Boyer,[3] Milroy.
Mary R. F. Miller,[2] Lewistown.
G. A. Leopold,[2] Lewistown.

MONROE—3.

Frank Koehler,* Stroudsburg.
E. L. Kemp,[6] East Stroudsburg.
Charles A. Goss,[4] East Stroudsburg.

MONTGOMERY—22.

J. Horace Landis,* Norristown.
W. W. Rupert,* Pottstown.
A. S. Martin,* Norristown.
H. J. Wightman,* Ardmore.
H. D. Steward,[4] Lansdale.
W. K. Groff,[4] Jenkintown.
Luther D. Showalter,[2] Pottstown.
T. J. Steltz,[4] West Conshohocken.
J. M. Fisher, Ambler.
W. R. Rahn,[4] Ambler.
E. L. Flack,[4] Abington.
James D. Arnold,[4] Norristown.
M. J. Bobb,[1] Ardmore.
C. E. Karlson,[4] Elkins Park.
James L. Street,[2] Ashbourne.
L. J. Loveland,[3] Pottstown.
D. S. Ebbert,[2] Elkins Park.
C. W. Hobbs,[2] Ardmore.
G. L. Omwake, Collegeville.
Isaac Sharpless, Haverford.
J. Linwood Eisenberg,[3] Royersford.
H. W. Weidner,[1] Pottstown.

MONTOUR—1.

D. N. Dieffenbacher,* Danville.

NORTHAMPTON—52.

George A. Grim,* Nazareth.
Fred W. Robbins,* ‡ Bethlehem.
Owen R. Wilt,* South Bethlehem.
W. D. Landis,* Northampton.
John W. Gruver,* Bangor.
Clara Sassaman,[1] South Bethlehem.
Agnes M. Ross,[1] Bethlehem.
Benton D. Kurtz,[1] Bethlehem.
Florence E. Baas,[1] Bethlehem.
Laura A. Nolf,[1] Bethlehem.
Eliza Chatten,[1] Bethlehem.
Maude I. Nickum,[1] Bethlehem.
Kate A. Lees,[1] Bethlehem.
Anna M. Goth,[1] Bethlehem.
A. S. Gruver,[1] Bethlehem.
Julia Schroeder,[1] Bethlehem.
W. H. Pomp,[1] Bethlehem.
Emma Benner,[1] Bethlehem.
Antoinette Bishop,[1] Bethlehem.
Ada M. Solt,[1] Bethlehem.
Gertrude Hafner,[1] Bethlehem.
Jane Reichard,[1] Bethlehem.
Lillie S. Deemer,[1] Bethlehem.
Charlotte M. White,[1] Bethlehem.
Lillian Mullen,[1] Bethlehem.
Ella L. Heberling,[1] Bethlehem.
George O. Billheimer, Bethlehem.
W. D. Seyfried,[1] Bethlehem.
Anna Murray,[1] Bethlehem.
Elda Schmehl,[1] Bethlehem.
S. Emily Bishop,[1] Bethlehem.
K. N. Musselman,[1] Bethlehem.
Sallie H. Villee,[1] Bethlehem.
Marion Murray,[1] Bethlehem.
Jean McCreary,[1] Bethlehem.
Ethel Shanor,[1] Bethlehem.
Louise Bischoff,[1] Bethlehem.
Gertrude Paules,[1] Bethlehem.
C. Edith Nickum,[1] Bethlehem.
I. H. Bartholomew,[1] Bethlehem.
A. I. Reinhard,[3] Hellertown.
P. S. Gayman,[3] East Bangor.
E. C. Lavers,[4] ‡ Pen Argyl.
H. L. Seaman,[1] Nazareth.
William A. Jones,[5] Easton.
S. P. Uhler,[2] Easton.
W. C. Sampson,[3] Bethlehem.
H. W. Shimer,[3] Northampton.
S. Clyde Frankenfield,[2] Northampton.
M. A. Richards,[3] South Bethlehem.
M. Alma Young,[1] Easton.
S. G. Simpson,[1] Easton.

NORTHUMBERLAND—56.

W. W. Fetzer,* Sunbury.
S. C. Yocum,* Shamokin.
I. C. M. Ellenberger,* Sunbury.
W. A. Wilson,* Milton.
Joseph Howerth,* Shamokin.
Emma Shipe,[1] Sunbury.
Kathryn Bier,[1] Sunbury.
Ida G. Cooney,[1] Sunbury.
Anna Shipman,[1] Sunbury.
Phoebe Wolfe,[1] Sunbury.
Elizabeth Keithan,[1] Sunbury.
Bessie C. Shipe,[1] Sunbury.
Mary Anten,[1] Sunbury.
Elizabeth Grant,[1] Sunbury.
Olive Smith,[1] Sunbury.
Mary Kline,[1] Sunbury.
Myrtle Kauffman,[1] Sunbury.
Margaret Willetts,[1] Sunbury.
Katherine Kerchner,[1] Sunbury.
Dora B. Orner,[1] Sunbury.
Dora Buck,[1] Sunbury.
E. W. Swank,[1] Sunbury.
Louis Mackinney,[1] Sunbury.
Clarence E. Drumm,[1] Sunbury.
S. O. Reed,[1] Sunbury.
A. T. Copenhaver,[1] Sunbury.
H. Hummel,[1] Northumberland, R.
Nellie Cummings,[1] Sunbury.
Maggie Ammerman,[1] Sunbury.

Minnie E. Brobst,[1] Sunbury.
Florence Copenhaver,[1] Sunbury.
Elizabeth Culp,[1] Sunbury.
Mary G. L. Round,[1] Sunbury.
Gertrude Snyder,[1] Sunbury.
Carolyn Bloom,[1] Sunbury.
Lou C. Rudy,[1] Sunbury.
Lou M. Bowen,[1] Sunbury.
Emma Gray,[1] Sunbury.
Sara Stoner,[1] Sunbury.
Curtie Eckert,[1] Sunbury.
Violet Jones,[1] Sunbury.
Lillian Thurston,[1] Sunbury.
Edward Weidenhammer, Milton.
Joseph Neary,[1] Shamokin.
Edward Herr,[1] Shamokin.
Florence J. Cawley,[1] Milton.
Bridget Cannon,[1] Locust Gap.
Keturah Jones,[1] Shamokin.
M. D. Costello,[1] Shamokin.
J. N. Strausser,[1] Shamokin.
William H. Deitman,[1] Shamokin.
Grace Johns,[1] Shamokin.
Joseph Knapper,[2] Sunbury.
E. N. Rhodes,[3] Sunbury.
S. H. Dean,* Mt. Carmel.
M. F. Kane,[3] Shamokin.

PERRY—10.

Daniel A. Kline,* New Bloomfield.
George F. Dunkelberger,[3] Newport.
Alma Bonsall,[1] Newport.
Kathryn Fleisher,[1] Newport.
Gladys Reem,[1] Duncannon.
Jennie Hicks,[1] Duncannon.
Catharine Rosborough,[1] Duncannon.
J. L. L. Buck,[3] Duncannon.
John Groff,[3] Marysville.
J. Thomas Fox,[3] New Bloomfield.

PHILADELPHIA—44.

M. G. Brumbaugh,‡ * 696 City Hall.
C. A. Herrick,‡ Girard College.
Edward Brooks,‡ 5971 Drexel Road.
A. L. Hannum,[3] 5044 Larchwood Av.
Martha H. Dunn,‡ [4] 16th & Porter.
Helen K. Yerkes,‡ [4] Germantown.
O. P. Corman,‡ [4] 422 Church Lane.
George E. Roth,[2] Central H. School.
Oliver C. Bosbyshell, 4048 Chestnut.
M. T. Maguire,[1] 1510 North 15th.
John L. Shroy,[4] ‡ 2810 N. Broad.
J. H. Michener,[4] ‡ 4512 Regent St.
J. L. Sigmund, Fox Chase.
A. McElroy,[1] 2643 N. Colorado.
John A. Donovan, 1412 Arch St.
A. D. Yocum,[1] College Hall, U. of P.
A. J. Pfaff, 1020 Arch St.
John J. Leckie, 1020 Arch St.
L. L. Narramore, 1209 Arch St.
George Wheeler,[4] 226 W. Johnston.
A. J. Morrison,[3] 2105 W. Venango.
J. M. Willard,[3] 13th & Spring Gard'n.
Geo. H. Stout,[4] 3746 Powelton Av.
Fred Gowing, Philadelphia.
J. E. Barrick,[1] Frankford.
T. R. Coggeshall,[4] Girard College.
C. J. Walter,[4] Philadelphia.
J. K. Rhodes,[1] 5734 Walnut St.
George A. Sigman, 1421 Arch St.
William Easley, Jr.,[1] U. of P.
Ethel M. Davie,[1] Girard College.
Lemuel Whittaker,[3] Oak Lane.
Charles C. Heyl,[3] 36 Chestnut St.
Vincent P. Brecht,[1] 8th & Lehigh.
F. W. Melvin,[1] Broad & Jackson Sts.
E. B. deLange,[1] Temple University.
S. S. Huhner,[1] University of Penna.
George H. Hallett,[1] U. of P.
W. D. Lewis,[3] Wm. Penn H. S.
G. E. Fisher,[4] University of Penna.
A. D. Jackson,[1] Girard College.
Jerry March,[1] Philadelphia.
Anne Elizabeth Suplee,[1] Philadelphia.
L. E. Martin, Philadelphia.

PIKE—1.

Lucian Westbrook,* Matamoras.

POTTER—4.

R. O. Welfling,* Coudersport.
John A. Entz,[3] Coudersport.
G. E. Zearfoss,[4] Coudersport.
Deforest Bartoo,[3] Sunderlinville.

SCHUYLKILL—15.

Livingston Seltzer,* Pottsville.
W. N. Ehrhart,* Mahanoy City.
William C. Estler,* Ashland.
J. W. Cooper,* Shenandoah.
John I. Mathias, Mahanoy City.
Jennie D. Kline,[1] Mahanoy City.
A. D. Miller,[3] Mahanoy City.
H. H. Spayd,‡ Minersville.
George W. Weiss,‡ Schuylkill Haven.
N. M. Frank,[3] Gordon.
A. M. Zimmerman,[1] Schuylkill Hav'n.
Carrie F. Kramer,[1] Minersville.
T. E. Garber,[3] Ashland.
Wilbur M. Yeingst,[4] Minersville.
Kate S. Richards,[2] Minersville.

SNYDER—46.

T. A. Stetler,* Middleburg.
A. D. Gougler,[3] Middleburg.
A. A. Bingaman,[1] Penns Creek.
Isaac Gearhart,[1] Middleburg.
George Brosius,[1] Mt. Pleasant Mills.
Cloyd Bottiger,[1] Mt. Pleasant Mills.
Frank Gingrich,[1] Mt. Pleasant Mills.
Francis R. Boyer,[1] Penns Creek.
Birchard Moyer,[1] Middleburg.
George Trawitz,[1] Middleburg.
L. V. Murphy,[3] Beaver Springs.
Ira A. Goss,[1] Beaver Springs.
H. C. Hendricks,[1] Selins Grove.
Roy W. Deitrich,[1] Kreamer.
M. P. Herman,[1] Selins Grove.
Harry Boyer,[1] Mt. Pleasant Mills.
Susie Winly,[1] Swineford.
Clara Winly,[1] Swineford.
Ellen Booth,[1] Selins Grove.
Nellie O. Forgy,[1] Selins Grove.
Harold Sheary,[1] Penns Creek.
Anna Gilbert,[1] Beavertown.
Mabel Klingler,[1] Middle Creek.
Verna Treaster,[1] McClure.
W. W. Brunner,[1] Paxtonville.
J. P. Rauch,[1] McClure.
E. E. Wetzel,[3] Beavertown.
W. C. Stevens,[3] McClure.
Bessie Freed,[1] Beavertown.
Sue Weaver,[1] Freeburg.
Rachael Moyer,[1] Freeburg.
Irvin L. Knouse,[1] Middleburg.
J. P. Walker,[1] Beavertown.
Jacob F. Wetzel,[1] Beavertown.
Eva M. McDowell,[1] Beavertown.
C. A. Miller,[1] Selins Grove.
Jennie H. Miller,[1] Selins Grove.
Harriet Zimmerman,[1] Selins Grove.
T. G. Herrold,[1] Port Trevorton.
H. H. Weber,[1] Selins Grove.
C. C. Kratzer,[1] Middleburg.
Maude Walborn,[1] Middleburg.
Kathryn Arbogast,[1] Middleburg.
Thomas G. Arbogast,[1] Middleburg.
J. I. Woodruff,[1] Selins Grove.
George W. Walborn,[3] Freeburg.

SOMERSET—8.

D. W. Seibert,* Somerset.
Harry E. Bowman,[4] Garrett.
H. M. Merritt,[4] Somerset.
Clara Shoemaker,[2] Somerset.
Carrie Rhoads,[1] Somerset.
Mildred Billo,[2] Somerset.
H. B. Speicher,[3] Friedens.
Willis W. Lautz,[3] Windber.

SULLIVAN—6.

Sarah Walters,[2] Dushore.
J. H. Ballentine,[4] Dushore.
F. C. Lechner,[1] Mildred.
W. W. Hazen,[1] Sonestown.
G. W. Portz,[1] Hillsgrove.
William Gillmore,[1] Dushore.

SUSQUEHANNA—5.

George A. Stearns,* Kingsley.
F. H. Taylor,[4] Forest City.
Harry L. Stearns,[2] Kingsley.
A. A. Killian,[4] Susquehanna.
J. S. Hosterman,[4] Montrose.

TIOGA—6.

W. R. Longstreet,* Mansfield.
Andrew Thomas Smith,[9] Mansfield.
Herbert Grant,[3] Westfield.
Oden C. Gortner,[6] Mansfield.
T. V. Tormey,[3] Arnot.
R. R. Stuart,[3] Elkland.

UNION—6.

W. W. Spigelmyer,* Mifflinburg.
Elbina L. Bender,[1] Lewisburg.
J. Stanford Lepley,[1] Windfield.
Anna Spangler, Windfield, R. D.
J. N. Glover, Vicksburg.
H. T. Meyer, Lewisburg.

VENANGO—4.

N. P. Kinsley,* Franklin.
James J. Palmer,* Oil City.
Gertrude E. Gaylord,[1] Franklin.
T. T. Allen,[3] Franklin.

WARREN—5.

C. S. Knapp,* Warren.
Charles C. Burch,[3] Sugar Grove, R. D. 4.
R. T. Adams,[4] Warren.
P. W. M. Pressel,[1] Warren.
F. H. Gaige,[3] Warren.

WASHINGTON—15.

L. R. Crumrine,* Washington.
James G. Pentz,* Charleroi.
G. R. Norris,[4] Burgettstown.
H. B. Davis,[6] California.
Fannie Arrison,[1] Charleroi.
Ella L. Greenwood,[1] Charleroi.
Etta M. Work,[3] Charleroi.
Jean Hawthorne,[1] Charleroi.
Howard Lloyd Trussell,[3] Washington, D. C.
Willard,[3] Charleroi.
Elizabeth Wyatt,[1] Charleroi.
Harriet Wagner,[1] Charleroi.
Price G. Frye,[1] Charleroi.
Mary Kelly,[1] Charleroi.
W. A. Swick,[2] Charleroi.

WAYNE—3.

J. J. Koehler,* Honesdale.
Mark Creasy,[3] Hawley.
Charles E. Martz,[2] Hawley.

WESTMORELAND—18.

Robert C. Shaw,* Greensburg.
Thomas S. March,‡ * Greensburg.
J. L. Spiegel,[4] Greensburg.
W. W. Ulerich,[4] Latrobe.
John D. Martz,[4] Greensburg.
J. J. Armstrong,[4] Vandegrift.
Ida Hazlett,[4] Latrobe.
Anna Horton,[2] Latrobe.
H. L. Creamer,[2] Greensburg.
J. S. Harkins,[2] Greensburg.
Charles Coxe,[3] Jeannette.
U. L. Gordy,[4] Mt. Pleasant.
J. H. Bortz,[2] Greensburg.
N. E. Henry,[3] Greensburg.
W. B. Greider,[3] Greensburg.
Mary M. Shull,[2] Greensburg.
W. M. Edwards,[3] Scottdale.
Landis Tauger,[4] Scottdale.

WYOMING—9.

Frank H. Jarvis,* Tunkhannock.
Belva L. Taylor,[1] Laceyville.
W. R. Croman,[1] Meshoppen.
Charles A. Race,[1] Vernon.
Belle Johnson,[1] Meshoppen, R. D. 5.
John E. Morgan,[1] Nicholson.
James F. Bedford,[1] Thurston.
Mrs. Vida D. James,[3] Nicholson.
C. W. Hoover,[3] Tunkhannock.

YORK—16.

C. W. Stine,* York.
A. Wanner,* York.
C. B. Pennypacker,[3] York.
C. G. Grim,[3] Windsor.
Almena Metzger, York.
J. C. Carey,* Hanover.
Dr. L. U. Zeck, York, New Salem.
Bertha K. Kable, York.
J. E. Harlacher,[3] Dillsburg.
W. W. Stauffer,[3] Red Lion.
W. L. Hoffheins,[3] Hanover.
Charles Albright,[3] Hanover.
C. H. Fisher,[2] York.
A. G. Hottenstein,[3] Shrewsbury.
Frank B. Green,[3] Hanover.
E. A. Nace,[1] Glen Rock.

OTHER STATES—13.

G. W. Holden, Springfield, Mass.
Wm. A. Nace,[1] Niagara Falls, N. Y.
E. H. Scott, New York City.
E. J. Shives,‡ * Menominee, Mich.
E. Mackey,‡ * Trenton, N. J.
Z. H. Snyder,‡ Greeley, Col.
Jas. Widdowson,[1] Westminster, Md.
H. A. Hompe, 36 W. 37th St., N. Y.
R. A. Metcalf, 36 W. 37th St., N. Y.
J. H. O'Donnell, 377 Broadway.
G. C. Preston, 24 W. 39th St., N. Y.
W. Anderson, 42 E. 22nd St., N. Y.
I. L. Brookmyer, Col. Univ., N. Y.

TOTAL, 1801.

ARBOR DAY PROCLAMATION.

In the name and by the authority of the Commonwealth of Pennsylvania.

A PROCLAMATION.

IT has become a National custom to observe Arbor Day. In Pennsylvania, as in other States, the observance of such a day is wisely enjoined by law, and the purpose of the annual Proclamation by the Chief Executive is to emphasize the importance of planting trees and of caring for them as part of our National wealth. In foreign countries, where large areas have been entirely denuded of trees, the frequency of floods, freshets and famines has shown the evil effects of the wanton destruction of forests. Those governments which have established rational systems of forestry have thereby set an example worthy of imitation by other States and Nations. A far-sighted policy of conservation and reforesting should, therefore, be pursued everywhere for the benefit of present and future generations. If Arbor Day is to be properly observed, trees must be planted, and something of practical value concerning trees should be taught in the school and at the home.

Therefore, I, John K. Tener, Governor of the Commonwealth of Pennsylvania, do hereby issue this my Proclamation, designating Friday, April seventh, and Friday, April twenty-eighth, 1911, to be observed as Arbor Days throughout the Commonwealth, and earnestly urge their observance by the planting of trees and by other suitable exercises.

Two days have been designated so that every section of the State may find a day for tree planting suited to its climatic conditions.

Given under my hand and the Great Seal of the State this fourteenth day of March, in the year of our Lord, one thousand nine hundred and eleven, and of the Commonwealth the one hundred and thirty-fifth.

JOHN K. TENER.

By the Governor:
ROBERT MCAFEE,
Secretary of the Commonwealth.

THE proclamation of Governor Tener in this number of *The Journal,* calls attention to the profitable work of planting trees. Not many people have this amiable weakness. It is a good 'thing in every way. Teachers do not plant trees. A teacher or superintendent who is an enthusiastic tree-planter and whose enthusiasm spreads to the boys and girls is a thrice-blessed influence in any community. How pleasantly he or she is thought of, and spoken of—and how long remembered! It is almost as easy to do this work as to let it go undone. But what difference in result!

The National Educational Association will hold its forty-ninth annual convention in the New San Francisco, July 8–14. Five years ago all arrangements had been made for the annual meeting at this place, when the great disaster of the earthquake and the fire occurred. The city has risen from its ruins greater than ever, more attractive and more interesting. Pennsylvania should be well represented at this meeting. The round trip ticket from Chicago will be $62.50. For round-trip rates from different parts of Pennsylvania address Deputy Supt. Reid B. Teitrick, Harrisburg.

The Pennsylvania State Educational Association became a chartered organization March 7th, when President Judge Kunkel approved the petition filed in the Dauphin County Court some weeks ago. The incorporation was asked for the purpose of promoting the welfare of the school system. The incorporators are Nathan C. Schaeffer, of Lancaster, State Superintendent of Public Instruction; Reid B. Teitrick, of Brookville; Fred. E. Downes, of Harrisburg; Cheesman A. Herrick, of Philadelphia, and Samuel Hamilton, of Pittsburg. The board of trustees for the first year includes George M. Philips, of West Chester; S. H. Dean, of Mount Carmel; George Leslie Omwake, of Ursinus College, Collegeville, and Fred. W. Robbins, of Bethlehem. The board of trustees will be elected annually. Incorporation, giving legal status to the State Association, requires that it shall have an office or place of business. No place seemed more fitting than the Department of Public Instruction, Harrisburg.

THE school code is under consideration in the Legislature. It was modified in committee, and the present ordeal through which it is passing will result in more changes, but it is hoped that the wreck of 1909 may not be repeated.

A Round Table conference of Superintendents and Principals of Central Pennsylvaina was held in the High School auditorium at Shamokin, March 17th and 18th. Supt. Joseph Howerth was president and Supt. T. S. Davis secretary. "The Records and Reports of Schools" was the one topic of this two-days meeting. It was considered from many sides, and a committee of fifteen appointed to recommend forms of blanks for use in the schools.

IN the list of delegates to the Directors' Association last month, the name of Mr. H. H. Shumaker, Rockwood, Somerset county, should have appeared. By an oversight it was not given in the list received by *The Journal.*